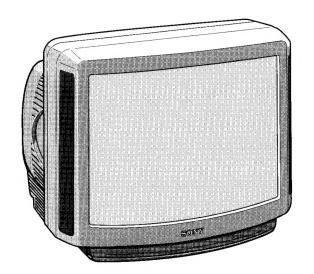
# **SERVICE MANUAL**

# BE-3B CHASSI

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-X2181A	RM-833	Italian	SCC-G81L-A	KV-X2182U	RM-833	UK	SCC-G87G
KV-X2183B	RM-833	French	SCC-G85J-A				
KV-X2181D	RM-833	AEP	SCC-G77L-A				
KV-X2183E	RM-833	Spanish	SCC-G82K-A				









ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Italian	B/G/H, D/K	GERMAN Stereo	ITALIA VHF:A-H2 (C) PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H,L, I	GERMAN Stereo	L VHF:F02-F10 UHF:F21-F69 CABLE:B-Q S21-S44 B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) I UHF:B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H, D/K	GERMAN/NICAM Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
uk	ı	NICAM Stereo	UHF : B21-B69	PAL NTSC4.43, NTSC3.58 (VIDEO IN)

ODEL	Italian	French	AEP	Spanish	UK
ower Consumption	89W	89W	89W	89W	117W

#### **SPECIFICATIONS**

cture Tube

Hi-Black Trinitron

Approx. 54.5 cm (21 inches) (Approx. 51 cm picture measured

diagonally) 110° -deflection

#### put/Output Terminals

#### EAR]

-1 21-pin Euro connector (CENELEC standard)

inputs for audio and video signals

inputs for RGB

outputs of TV video and audio signals

·2/ © 221-pin Euro connector inputs for audio and video signals

inputs for S video

outputs for audio and video signals (selectable)

[FRONT]

€3 Video input - phono jack ⊕3 Audio inputs - phono jacks €3 S video input 4-pin DIN

 $\Omega$  Headphone jacks: stereo minijack

Sound output

2 x 30W (Music power)

Dimensions

Approx. 517x443x485 mm

Weight

Approx. 26.5kg

Supplied accessories

RM-833 Remote Commander (1)

IEC designation R6 battery (1)

Other features

NICAM, FASTEXT, TOPTEXT.

[RM-833]

Remote control system

infrared control

Power requirements

1.5V dc1 battery IEC designation

R6 (size AA)

Dimensions

Approx. 65x225x21 mm (w/h/d)

Weight

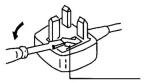
Approx. 157g (Not including batteries)

Model name	KV-X2181A	KV-X2183B	KV-X2181D	KV-X2183E	KV-X2182U
Pal Comb	OFF	ON	OFF	OFF	OFF .
PIP	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	OFF	OFF	OFF
Woofer Box	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	ON
Norm D/K	ON	OFF	ON	OFF	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF
Toptext	ON	ON	ON	ON	OFF
Nicam Stereo	OFF	ON	OFF	ON	ON
Language Preset	Italian	French	German	Spanish	English

# WARNING (KV-X2182U only)

The flexible mains lead is supplied connected to a B.S. 1363 fused plug having a fuse of 5 AMP capacity. Should the fuse need to be replaced, use a 5 AMP FUSE approved by ASTA to BS 1362, ie one that carries the mark.

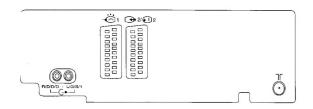
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET. When an alternative type of plug is used it should be fitted with a 5 AMP FUSE, otherwise the circuit should be protected by a 5 AMP FUSE at the distribution board.

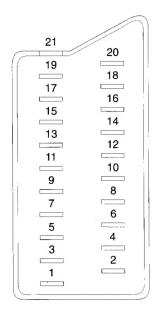


How to replace the fuse. Open the fuse compartment with the screwdriver blade and replace the fuse.

FUSE

# in connector (Ö-1 O 2/O 4)

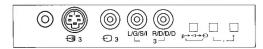




Pin No.	1	2	4	Signal	Signal level
1		_		Audio output B	Standard level : 0.5V rms
'	0	0	0	(right)	Output impedance :Less than 1kohm*
2	0	0	0	Audio input B (right)	Standard level : 0.5V rms Output impedance :More than 10kohm*
3	0	0	0	Audio output A	Standard level : 0.5V rms
				(left)	Output impedance :Less than 1kohm*
4	0	0	0	Ground (audio)	
5	0	0	0	Ground (blue)	
6	0	0	0	Audio input A (left)	Standard level : 0.5V rms Output impedance :More than 10kohm*
7	0	•	•	Blue input	$0.7 \pm 3$ dB, 75 ohms, positive
8	0	0	0	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10k ohms Input capacitance : Less than 2nF
9	0	0	0	Ground (green)	
10	0	0	0	Open	
11	0	•	•	Green	Green signal: 0.7 ± 3dB, 75 ohms, positive
12	0	0	0	Open	
13	0	0	0	Ground (red)	
14	0	0	0	Ground(blanking)	
	0	_	_	Red input	$0.7 \pm 3$ dB, 75 ohms, positive
15	_	0	0	(S signal) croma input	0.3 ± 3dB, 75 ohms, positive
16	0	•	•	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75ohms
17	0	0	0	Ground(video output)	
18	0	0	0	Ground(video input)	
19	0	0	0	Video output	1V ± 3dB,75ohms,positive sync:0.3V(-3+10dB)
	0	_	_	Video input	1V ± 3dB,75ohms,positive sync:0.3V(-3+10dB)
20	_	0	0	Video input Y (S signal)	1V ± 3dB,75ohms,positive sync:0.3V(-3+10dB)
21	0	0	0	Common ground (plug, sheild)	

○ Connected ● Not Connected (open) \* at 20Hz - 20kHz

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	$1V \pm 3dB$ 75 ohm , positive Sync. 0.3V -3/+10 dB
4	C (S signal) input	$0.3V \pm 3dB 75$ ohm , positive Sync.



#### **TABLE OF CONTENTS**

Sec	tion	<u>Title</u>	<u>Page</u>	Sec	tion	<u>Title</u>	$\underline{P}\epsilon$
1.		ERAL Getting Started		5.	<b>DIA</b> 5-1. 5-2. 5-3.	AGRAMS Block Diagram Circuit Boards Location Schematic Diagrams and Printed Wiring Boards *H1 Board *H2 Board *H3 Board *F1 Board *D Board	s
2.	2-1. 2-2. 2-3. 2-4. 2-5.	ASSEMBLY Rear Cover Removal Chassis Assy Removal Service Position A Board Removal Extension Board Picture Tube Removal		6.	6-1.	* A Board * C Board Semiconductors  PLODED VIEWS Chassis Picture Tube	
3.	3-1. 3-2. 3-3.	F-UP ADJUSTMENTS  Beam Landing  Convergence  Focus  White Balance	18 20	7.	ELI	ECTRICAL PARTS LIST	
4.	4-1. 4-2.	Electrical Adjustments Electrical Adjustments Test Mode 2: BE3B Self Diagnostic Software	22				

#### CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

#### WARNING!!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD, DUE TO A LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

#### SAFETY-RELATED COMPONENT WARNING!

COMPONENTS IDENTIFIED BY SHADING AND MARKED A ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLIMENTS PUBLISHED BY SONY.

#### **ATTENTION**

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

#### ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÈ I DE TOUT DÈPANNAGE. LE CHÁSSIS DE CE RÈCEPTEUR I DIRECTEMENT RACCORDÈ Á L'ALIMENTATION SECTEU

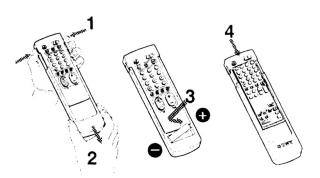
#### ATTENTION AUX COMPOSANTS RELATIFS Á LA SÈCURITÈ !!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAUNE MARQUE À SUR LES SCHÈMAS DE PRINCIPE, LE VUES EXPLOSÈES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÈCURITÈ DIFONCTIONNEMENT, NE LES REMPLACER QUE PAR DE COMPOSANTS SONY DONT LE NUMÈRO DE PIÈCE ES INDIQUÈ DANS LE PRÈSENT MANUEL OU DANS DES SUPPLÈMENTS PUBLIÈS PAR SONY.

# SECTION 1 GENERAL

# GSilling Skrike

# Inserting the Battery Into the Remote Commander



emove the cover.

Check the correct polarity.

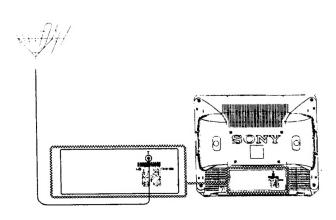
Refit the outside cover making sure that the Full Function side is visible.

## out Battery Life

der normal operation, a battery will last up to half a year.

# Connecting the Aerial

Connect aerial to the Tr socket at the rear of the TV. (cable not supplied)



# Choosing a Language

ee inside of front cover and back cover)

Depress ① A on the TV.

The TV turns on. If the standby indicator B on the TV is lit, press 0 3 or any number button 4 on the Remote Commander.

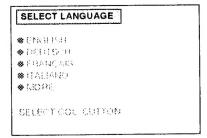
Press MENU 7 on the Remote Commander.

The SELECT LANGUAGE screen appears.



The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

Press one of the colour buttons 17 on the Remote Commander to select a language (Press the white button 17 to display other language alternatives). The SELECT LANGUAGE screen clears and all subsequent menus appear in the chosen language.



Note: From the second time when you turn on the TV, the MENU screen appears instead of the SELECT LANGUAGE screen. Press the yellow button 17 then press the white button 17 to redisplay the SELECT LANGUAGE screen.

# **Tuning in to Channels**

You can tune in up to 100 channels to programme positions either automatically or manually.

A single button press allows all auto tuning:

receivable channels to be tuned. Use if you are unfamiliar with the channel numbers of stations.

Use if you are familiar with the manual tuning:

channel numbers of stations.

Choose the more appropriate way for you.

# Tuning in to Channels Automatically

There are two possibilities for auto tuning;

A. On the TV: hold down E on the front of the TV for 2 seconds

or B. On the Remote Commander: as follows

Press MENU 7.

Press the white button 17.

Hold down the red button 17 for 2 seconds,

Note: Press the green button 17 to cancel.

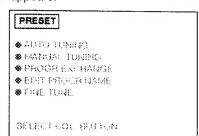
- 6 ---

**Tuning in to Channels Manually** 

1 Press MENU 7.
The MENU screen appears.

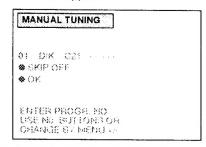


**2** Press the white button 17 to select PRESET. The PRESET screen appears.



**3** Press the green button 17 to select MANUAL TUNING.

The MANUAL TUNING screen appears.

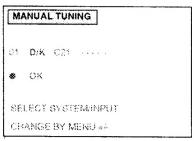


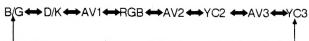
4 Press the number buttons 4 or MENU+/- 9 to select a programme position.

If you use the number buttons 4, enter a double-digit number. (e.g. for programme number 4, first press 0, then 4)

5 Press the green button 17.

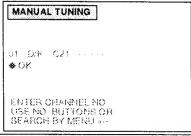
Note: Use MENU +/- 9 to select TV system. You can alternatively select input sources which may be assigned to programme positions. The display changes as follows:





6 Press the green button 17.

Note: If a video input source is selected in step 5, this is now stored. Refer to step 4 to tune other programme positions.



When you have selected B/G, press the red button 17 to select C (regular channel) or S (cable channel).

Press the number buttons 4 or MENU+/- 9 to select the channel number.

If you use the number buttons 4, enter a double-diginumber. (e.g. for channel 23, first press 2, then 3)

9 Press the green button 17 to store.

**Note:** If you want to preset other channels, repeat ste, 4 to 9.

Press MENU 7 twice to return to the normal screen.

Note: You can skip unused programme positions when selecting programmes with the PROGR +/- buttons 18. Press the red button 17 to skip in step 4. However, the skipped programmes may still be called up when you use the number buttons.

# Basic TV Operations

# Turning the TV on and off

Turning on

Depress ① A on the TV.

Turning off temporarily

Press () 10 on the Remote Commander.

The TV enters standby mode and the standby indicator  $\bar{E}$  on the front of the TV lights up.

Turning on again

Press (3), PROGR+/– (18), or one of the number buttons (4) on the Remote Commander.

Turning off completely

Depress ① A on the TV.

**Note:** It is recommended to use  $\bigcirc$   $\boxed{A}$  to turn off the TV. This could help you save energy.

**Selecting TV Programmes** 

Press PROGR+/- 18 or press number buttons 4.

To select a double-digit number

Press -/-- [5], then the number buttons [4].

Adjusting the Volume

Press 4+/- 19

# Muting the Sound

Press 🕸 🚺

To resume normal sound, press & 1 again.

# Displaying the On-screen Indications

Press 14 once to display the on-screen indications. Press again to make the indications disappear.

**Note:** If NICAM is transmitted regardless of whether it is stereo or mono, the two speaker symbol automatically appears on the screen for several seconds.

Operating the TV Using the Buttons on the 1

With the buttons on the TV, you can adjust or select the functions as follows:

Press  $\longrightarrow +/-[D]$  to adjust the volume.

Press P+/- C to select programme numbers or to tur the TV on from the standby mode.

Press F to select the input source.

Press E to preset channels automatically.

# Advanced TV Operations

# **Operating the Menu System**

ou can adjust picture and sound, preset channels to ogramme positions and utilise other convenient features  $\gamma$  using the following menu system.

Pres	ss;	to;
1	MENU 7	enter the MENU screen
2	a colour button 17	select an item you want to change (The selected item is marked by a triangle.)
3	MENU+/- 9 + -	change (or adjust) the contents of the item
4	MENU 7	return to the MENU screen
5	MENU 7 again	return to the normal screen
	r=1	

Press MENU 7 once or twice whenever you want to return to the normal screen.

**ote:** When selecting menus, the picture becomes darker, however, an item in the PICTURE ADJUSTMENT menu selected, normal level of TV picture is restored to allow le best adjustment.

# Adjusting the Picture and Sound

Ithough picture and sound are adjusted at the factory you an adjust them to suit your own taste.

Press MENU 7.
The MENU screen appears.



- Press the red button 17 to select PICTURE or the
   green button 17 to select SOUND.
- Press the respective colour button 17 to select an
- 1 Press MENU +/- 9 to adjust.
- Press MENU 7 twice or wait until the menu displays disappear automatically to return to the normal screen.

#### PICTURE ADJUSTMENT

(First Page)

#### 

Press colour button	Effect
Red: For Picture ①	Less ——— More
Green: For Colour 3	Less ——I—— More
Yellow: For Brightness	Darker ——I—— Brighter
Blue: For Sharpness ①	Softer ——I—— Sharper
White:	Next page of PICTURE ADJUSTMENT

### PICTURE ADJUSTMENT

(Second Page)

PICTU	RE ADJUSTMENT
+00E0	OR TONE NORMAL
<b>≱</b> FOSN	IAT NORMAL
*BOTA	TION NORMAL
<b>\$</b> ck24	
* HACK	

Press colour button	Effect
Red: For Colour Tone	Normal -> Warm (reddish colour tone) -> Cool (blueish colour tone)
Green: For Format  Yellow: For Picture Rotation (only for KV-X2981K)	Normal: Normal setting 16:9 Wide screen effect  Normal: Normal setting  -5~+5: Adjusts the picture slant caused by the earth magnetism
Blue: For Hue control △⁴2⊿ (only for NTSC video signals)	ReddishI Greenish
White:	Back to first page of PICTURE ADJUSTMENT

Note: Press → • € 8 on the Remote Commander to reset to the factory preset levels for picture and sound.

#### SOUND ADJUSTMENT

(First Page)

# SOUND ADJUSTMENT

 ▶ ∠3
 Bibliomation

 ♦ 3
 Bibliomation

 ★ 2
 Bibliomation

**♦** MORE

SPLECTION SUITON ADJUST BY MEDIUM

Press colour button	Effect
Red: For Volume ✓	Less More
Green: For Treble &	Less ——I—— More
Yellow: For Bass 2:	Less ——I—— More
Blue: For Balance △△	More left - more right
White:	Next page of SOUND ADJUSTMENT

#### SOUND ADJUSTMENT

(Second Page)

SPACE SOUND OFF	
◆ LOUDNESS OFF	
<b>₩</b> 4 STEREO	
* RESET	
◆ BACK	

Press colour button	Effect
Red:	
For Space Sound	OFF: normal sound ON: for a special acoustic sound effect
Green:	
For LOUDNESS	OFF: normal sounds ON: when listening to music broadcast
Yellow: For Stereo:	Stereo -> Mono A (left channel) - > Mono B (right channel) -> Mono
Blue: For Reset:	Resets to the factory preset levels for picture and sound
White:	Back to first page of SOUND ADJUSTMENT

**Note:** Press →•← 8 on the Remote Commander to reset to the factory preset levels for picture and sound.

# **Using Special Features**

With your TV you can utilise special features such as Parental Lock or Sleep Timer.

1 Press MENU 7.
The MENU screen appears.

MENU

**?** Press the yellow button 17 to select FEATURES.

**3** Press the respective colour button 17 to select an item.

4 Press MENU +/- 9 to change.

5 Press MENU 7 twice or wait until the menu displays disappear automatically to return to the normal screen.

#### **FEATURES**

#### FEATURES

- ▶ SLEEP TIMER OFF
- ◆ PAREUTAL LOCK OFF
- ♦ TV BUTTON LOCK OFF.
- **₩** DEMO MODE
- ♦ LANGUAGE

SELECTICOL BUTTON CHANGE BY MENU-

Press colour button	Effect
Red: For Sleep Timer	OFF -> 0:30 -> 1:00 -> 1:30 -> 2:00
(Automatic switch off function)	(hours) After the selected time the TV set switches itself automatically into standby mode.
Green: For Parental Lock (For preventing children from watching programmes which you consider unsuitable)	OFF: Normal setting ON: The TV-channel you are watching is now blocked. In this wa you can prevent undesirable broadcasts from appearing on the screen.
<b>Yellow</b> For TV Button Lock	OFF: Normal setting ON: The buttons on the TV do not function anymore. (The Remote Commander still operates)
<b>Blue:</b> For Demo Mode	ON: A sequence of menu pictures is displayed. Press any button on the Remote Commander to stop the function.
White: For Language	The SELECT LANGUAGE screen appears.

# Advanced Presetting Functions

xchanging Programme Positions

bu can exchange the programme positions to a preferred der (example: exchange programme 09 (channel C21) th programme 15 (channel C24).

Press MENU 7.
The MENU screen appears.



- Press the white button 17.
- \* The PRESET screen appears.

Press the yellow button 17.

The PROGR EXCHANGE screen appears.



- Press the white button 17 repeatedly until the desired programme number (09) appears.
- Press the red or the green button 17 repeatedly until the desired channel number (C24) appears.
- Press the white button 17 to store.

  Now the exchange has been completed. Channel C24 is tuned in to programme 09 and channel C21 is tuned in to programme 15.
- ' Press MENU 7 twice to return to the normal screen.

# diting Programme Names

ou can edit the programme names up to five letters.

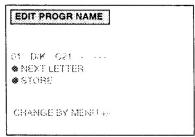
Press MENU 7.
The MENU screen appears.



- ) Press the white button [17].
- The PRESET screen appears.
- Press the blue button 17.

The EDIT PROGR NAME screen appears.

The first character flashes.



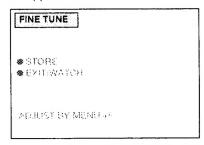
4 Press MENU+/- 9 to edit the first letter. The first letter changes as follows;

- 5 Press the red button 17 to move to the next letter.
- 6 Repeat steps 4 to 5, until the fifth letter is chosen.
- Press the green button 17.
  The programme name is stored, and the normal screen appears. To edit another programme name, repeat steps 1 to 7.

Fine Tuning

You can adjust the receiving condition by the FINE TUNE function.

- **1 Press MENU** 7. The MENU screen appears.
- 2 Press the white button 17.
  The PRESET screen appears.
- 3 Press the white button 17 again. The FINE TUNE screen appears.



- 4 Press MENU+/- 9 to adjust the receiving condition.
- 5 Press the red button 17 to store the adjustment, or press the green button 17 not to store.

  Then the normal screen appears. If you have pressed the green button, the fine tuned condition is cancelled once you choose another programme.

**Tuning in to a Channel Temporarily** 

You can tune in to a channel temporarily, even when it has not been preset.

1 Press C 16 on the Remote Commander. For cable channels, press C 16 twice.

The indication "C" ("S" for cable channels) appears on the screen.

Enter a double-digit channel number using the number buttons (e.g. for channel 23, first press 2, then 3).

The channel appears.

However, the channel is not stored.

# **Teletext Operation**

TV stations broadcast teletext programmes via the TV channels. For basic operation of teletext, use the simple side of the Remote Commander. For the advanced features of teletext, use the buttons indicated in green on the full function side of the Remote Commander.

## **Basic Teletext Operation**

Switching Teletext on and off

1 Select the channel which carries the teletext service you wish to view.

Press 111 to display Teletext.
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

3 Input three digits for the page number using the number buttons 4.

The numbers are displayed on the screen and the requested page appears in a few seconds.

**Note:** If you make a mistake, type in any three digits, then re-enter the correct page number.

4 Press O 3 once or 11 twice to return to the TV mode.

Note: To change the teletext channels. First press 
to return to the TV mode, then repeat steps 1 to 3.

Note: If the signal of a TV channel is weak, teletext errors may occur.

# **Advanced Teletext Operation**

#### **Using Fastext**

With Fastext you can access pages with one button press. When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.

Press the corresponding colour button [6] on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed in a few seconds.

Requesting the Index page

Press 117. The Index page appears.

Accessing the next or preceding page

Press (PAGE +) or (PAGE -) (18). The next or the preceding page appears on the screen.

Superimposing the teletext display on the TV picture

Press (a) 11 once if you are in text mode or press (b) 11 twice if in TV mode.

To return to the normal teletext display press ( 11 twice.



Preventing a teletext page from being updated or changed

Press (HOLD) (2). The HOLD symbol (19) appears on the screen and the selected subpage is held until you press (11) to cancel.

Enlarging the teletext display

Press 📵 13 once to enlarge the upper half. Press twice t enlarge the lower half. Press again to restore the normal display.





Revealing concealed information (e.g. answers to a quize Press (REVEAL) (14). The information is revealed. Pres (14) again to conceal the information.

Watching TV while waiting for a requested page to be displayed

Request a new teletext page.

Press ⊠(TEXT CL) 12.

The TV programme is displayed and the symbol (a) is displayed at the top of the page.

**Note:** When the requested page is available the page number is displayed at the top of the screen.

R Press (1) to view the page.

Note: To cancel the request

Display the teletext page, then press (a) The request in now cancelled. Press (a) to resume TV mode.

Using the Favourite Page system

You can store up to four of your favourite teletext pages pe programme with the help of the Favourite page system. In this way you have quick access to the pages you watch frequently.

#### Storing the Favourite Pages

- Select the page you would like to store using the number buttons 4.
- 2 Press ↔ 15 twice.

The colour prompts at the bottom of the screen flash.

Press any of the colour buttons 6 on the Remote Commander to store the selected page.

The page is now stored on this button.

Repeat steps 1 to 3 for the other 3 pages available.

Displaying the Favourite pages

**1** Press ↔ 15

2 Press the colour button 6 corresponding to the colour prompt onto which the desired page is stored. The page is requested. (It may take a few seconds to be received).

**Note:** Step 1 must be taken before every favourite page selection, otherwise the normal Fastext facility operates.

Using the Time Function in the TV mode

Press ① 12 to request the time. Press again to cancel the request

**Note:** This function is available only when teletext is broadcast.

# **Connecting Other Equipment**

You can connect optional audio/video equipment to this TV such as VCRs, video disc players, cameras or stereo systems.

Connector	Acceptable input signal	Available output signal
<b>⇔1 M</b> (AV1/RGB)	Audio/video and RGB signal	Audio/video signal from TV Tuner
S→2/-S2 L (AV2) (YC2)	Audio/video and S video signal	Audio/video signal from selected source
<b>⊕3/⊕3 GH</b> (AV3)	Audio/video signal and	No outputs
- <b>⊙3/-</b> - <b>⊙3 G I</b> YC3)	Audio/S video signal	

To watch a video input picture, press 2 until the desired video input appears.

For return to the normal TV picture, press 2 repeatedly or press 3.

Note: If you have a decoder, connect it to 👸 1 M.

#### Connecting a VCR Using the TV Aerial Ferminal

Sonnect the aerial output of the VCR to the aerial terminal K of the TV. It is recommended to tune in the VCR signal o programme number "0". For details, see "Tuning in to Shannels Manually" on page 6.

**Vote:** S video input (Y/C input) IL

/ideo signals may be separated into Y (luminance or orightness) and C (chrominance) signals.

Separating the Y and C signals prevents them from inter-

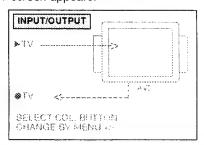
# Checking and Selecting the Input and Output Sources Using the Menu

You can display a menu screen to see which input and output source are selected. You can also change the selection using this menu.

# **Checking the Input and Output Sources**

1 Press MENU 7.
The MENU screen appears

2 Press the blue button 17 to select INPUT/OUTPUT. The INPUT/OUTPUT screen appears.



#### Selecting an Input Signal

Press the red button  $\boxed{17}$  to select INPUT. Press MENU +/- $\boxed{9}$  to select the desired input source.

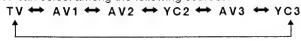
You can select among the following sources:



## Selecting an Output Signal

The S 2 / - 2 connector L outputs the source input from the other connectors. Press the green button 17 to select OUTPUT. Press MENU +/- 9 to select the desired output source.

You can select among the following sources:



Note: Press MENU [7] twice or wait until the menu displays disappear automatically to return to the normal screen.

# Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as: Beta, 8mm or VHS VCRs or video disc players.

# Tuning the Remote Commander to the equipment

1 Set the VTR 1/2/3 MDP selector 20 according to the equipment you want to control:

VTR 1: Beta VCR VTR 2: 8mm VCR VTR 3: VHS VCR

MDP: Video Disc Player

# **2** Use the buttons 21 to operate the additional equipment.

**Note:** If your video equipment is furnished with a COMMAND MODE selector: set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.

**Note:** If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.

**Note:** When you use the ● (record) button, make sure to press this button and the one to the right of it simultaneously.

# **Using Headphones**

You can utilise headphones. Connect them to the headphone jack J, then the sound from the speakers goes off.

**Note:** You can't control the sound adjustment except for volume.

# For your information

## Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.

#### No picture (screen is dark), no sound

- · Plug the TV in.
- Press ① A on the TV. (If the standby indicator
- B is lit, press 3 or any number button 4 on the Remote Commander.)
- · Check if the selected video source is on.
- Turn the TV off for three or four seconds and then turn it on again using ⊕ A.

#### Poor or no picture (screen is dark), but good sound

• Press MENU 7 to enter the MENU screen, and press the red button 7, then adjust 0 and .

#### Good picture but no sound

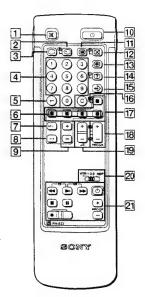
#### No colour for colour programmes

• Press MENU 7 to enter the MENU screen, and press the red button 17, then adjust 3.

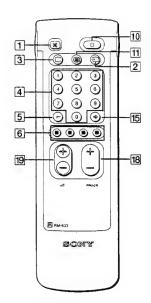
#### Remote Commander does not function

Replace the battery.

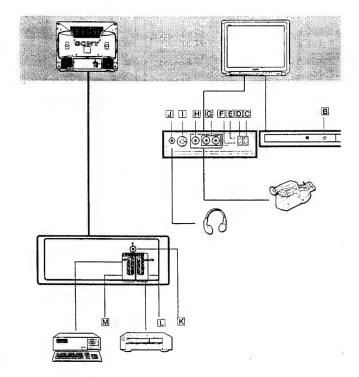
If you continue to have problems, have your TV serviced k qualified personnel. Never open the casing yourself.



Full-Function Side Полно функциональная Teijes Funkciós Oldal Strana se všemi Funkcemi Strona Funkcji Złożonych Страна с Всички Функции

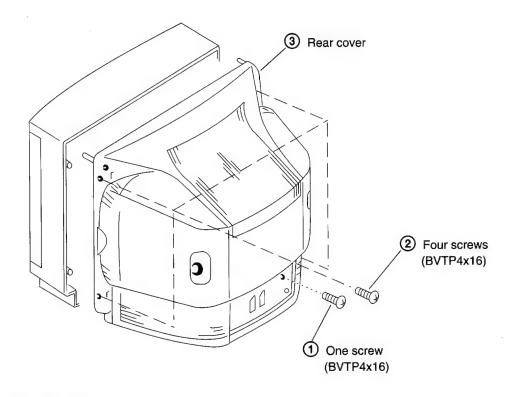


Simple Side Простая Сторона Egyszerű Oldal Jednoduchá Strana Strona funkcji podstawowych Страна с Оиростени Функции

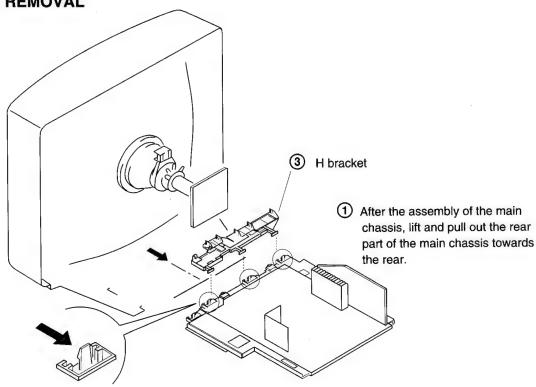


# SECTION 2 DISASSEMBLY

# 1. REAR COVER REMOVAL

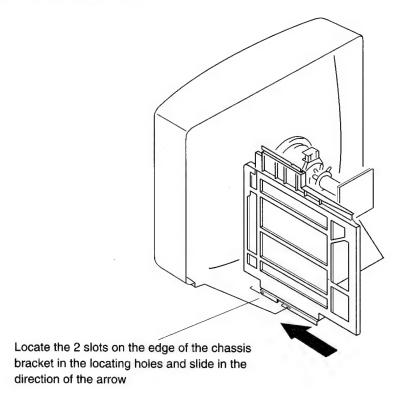






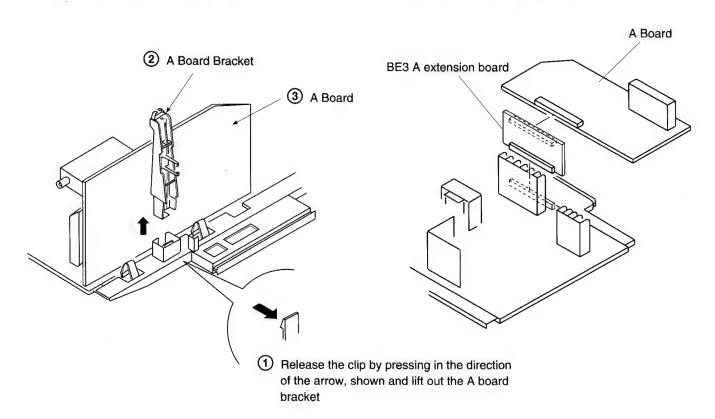
2 Push the three claws of the main chassis in the direction of the arrow and remove the H bracket upwards.

# 2-3. SERVICE POSITION

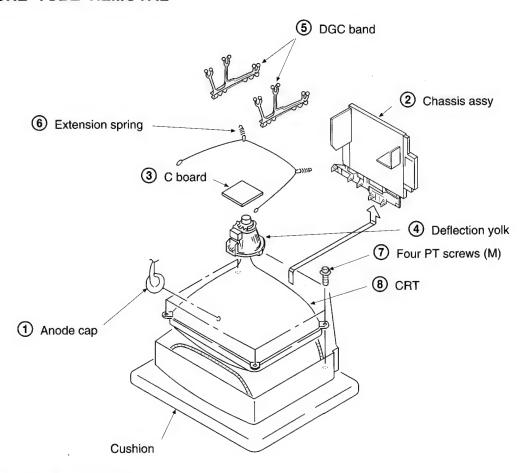


# 2-4. A BOARD REMOVAL

# 2-5. EXTENSION BOARD



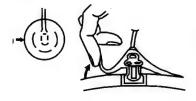
### 3. PICTURE TUBE REMOVAL

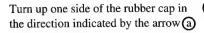


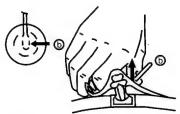
### **REMOVAL OF ANODE-CAP**

te: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

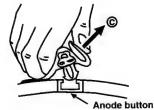
#### REMOVING PROCEDURES.







Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)

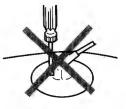


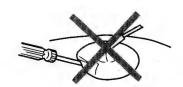
When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow (C)

#### **HOW TO HANDLE AN ANODE-CAP**

- Don't damage the surface of anode-cap with sharp shaped material!
- Don't press the rubber hardly not to hurt inside of anode-caps!
  - A metal fitting called as shatter-hook terminal is built into the rubber.
- Don't turn the foot of rubber over hardly!

  The shatter-hook terminal will stick out or damage the rubber.





# SECTION 3 SET - UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted. The controls and switch below should be set as follows unless otherwise noted:
  - CONTRASTcontrol ...... 80%(or Normal by commander)

⇔ BRIGHTNESS control ---- 50%

Perform the adjustments in order as follows:

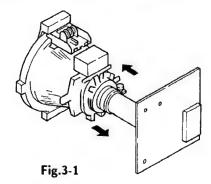
#### Preparation:

- Set the side of the unit with the PICTUE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser..

#### 3-1. BEAM LANDING

Demagnetize with a degausser

- 2. Turn the raster signal of the pattern generator to red.
- Move the deflection yoke backward, and adjust with the purity control so that red is in the center and blue and green are at the sides evenly. (Fig.3-1 - 3-3)
- 4. Move the deflection yoke forward, and adjust so that the entire screen becomes red. (Fig.3-1)
- 5. Switch over the raster signal to blue and blue and confirm the condition.
- When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.
- 7. When landing at the corner is not right, adjust by using the disk magnets. (Fig.3-4)



1. Beam Landing

- 2. Convergence
- 3. Focus
- 4. Screen (G 2) and White Balance

Note: Test Equipment Required.

- 1. Color bar/Pattern Generator
- 2. Degausser
- 3. DC Power Supply
- 4. Digital multimeter
- 5. Oscilloscope

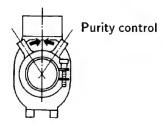


Fig.3-2

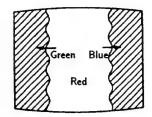
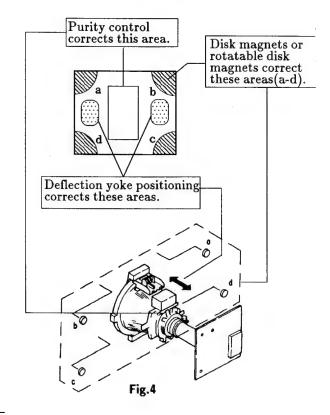


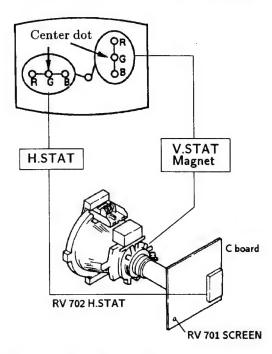
Fig.3-3



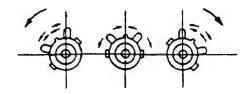
#### 3-2. CONVERGENCE

#### Preparation:

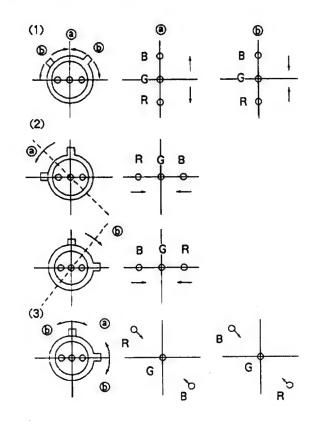
- Before starting, perform FOCUS, H.SIZE, and V.
   SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in the dot pattern.
- (1) Horizontal and Vertical Static Convergence



- 1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen. (Horizontal movement)
- 2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
- 3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizontal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)
- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4. When the V.STAT magnet is moved in the direction of arrow @ and D, red, green and blue dots move as shown below.

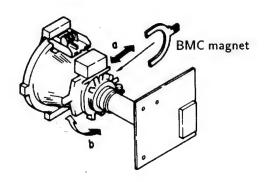


If the red and blue dot do not converge with green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

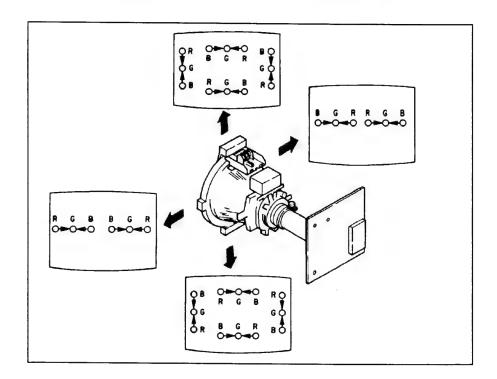


# (2) Dynamic Convergence Adjustment

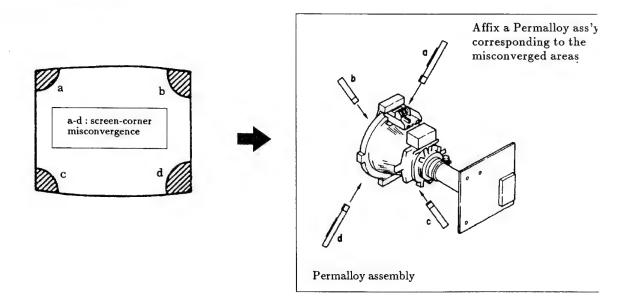
# Preparation:

- Before starting perform Horizontal and Vertical static convergence Adjustment.
- 1. Slightly loosen deflection yoke screw.
- 2. Remove deflection yoke spacers.

- 3. Move the deflection yoke for best convergenceas shown below.
- 4. Tighten the deflection yoke screw.
- 5. Install the deflection yoke spacers.

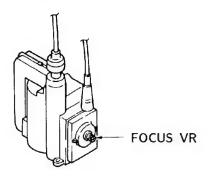


# (3) Screen-corner Convergence



#### **3-3. FOCUS**

Adjust FOCUS so that the whole screen is in best focus.



### 3-4. WHITE BALANCE

#### Screen G2 Setting

- 1. Input the dot signal from the pattern generator.
- 2. Set the picture brightness control to its lowest level.
- 3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
- 4. While watching the picture, adjust G 2 control RV 701 (Screen) to the point just before the return lines disappear.

#### White balance adjustment

- 1. Receive all-white signal.
- Enter into service mode. (Refer to the section 4
   "Electrical Adjustment" to how to enter service
   mode.)
- 3. Select CXA 1587 on menu.

09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.

- 4. Set picture to MAX.
- 5. Adjust G-DRIVE B-DRIVE with ∑, ∑ buttons so that the white balance becomes optimum.
- 6. Press OK button to write the data for each item.
- 7. Set picture to MIN.
- 8. Adjust G-AUTO CUT OFF, B-AUTO CUT OFF, R
  -MANUAL CUT OFF, G-MANUAL CUT OFF and
  B-MANUAL CUT OFF with buttons so
  that the white balance becomes optimum.
- 9. Press OK button to write the data for each item.

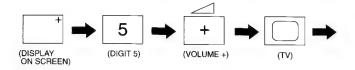
# SECTION 4 CIRCUIT ADJUSTMENTS

# 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-833.

# HOW TO ENTER INTO SERVICE MODE

- 1. Turn on the main power switch of the set and enter into standby mode.
- 2. Press the following sequence of buttons on the Remote Commander.



"TT" will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.

DEVICE NAME
STAT : xxxx  NEXT PREVIOUS OK
USE COLOUR KEYS SONY TEST MENU.

4. Press the Red (Next) and Green (Previous) buttons to select the device corresponding to the adjustment item from the table. Then press the White button (OK).

DEVICE NAME
00 ADJUSTMENT: xxx
□ NEXT □ PREVIOUS
SELECT COL.BUTTON CHANGE BY MENU +/-

- 5. Press the Red (Next) or Green (previous) buttons to select the adjustment item. Then press the ∑ and ∑ buttons to change the data to comply with each standard.
- Turn off the power to quit the service mode when adjustments are completed.

Initial Conditions for setup of TDA8366, TDA6612, TDA66 and SAA7283. ( Stereo Models Only )

	•		
TDA8366 1	INIT VALUE	TDA8366 2	INIT VALUE
Hue	31	Interlace	00
H Shift	Adj	Sync Mode	00
H Size	Adj	Col Dec	00
Pin Amp	Adj	Vert Div	00
Corn Pin	Adj	Vid ID	00
Tilt	Adj	EHT Track	01
V.Linear	Adj	En V Grd	00
V.Size	Adj	Serv Blk	00
S.Corr	Adj	OVP Mode	00
V.Cent	Adj	Aspect R	00
HWB Red	Adj	Start Freq	00
HWB Green	Adj	Y/C Input	00
HWB Blue	Adj	PAL/NTSC	00
Peaking	8	Xtal PLL	00
Bright	32	Y Delay	07
Colour	32	RGB Blk	00
Picture	37	Noise Cor	00
AGC Set	00	Fast Blk	01
Srce Sel 1	00	AFC Wind	00
Srce Sel 2	00	IF Sensty	00
Time Con	03	Mod Std	00
Xtal Ind	03	Vid Mute	01
FF Freq	02		

TDA6612 (TDA6622 for UKmodel.)	INIT VALUE	TDA6612 (TDA6622 for UKmodel.)	INIT VALUE
MPX Per	00	Mute 2	01
Quasi St	00	C1/2LS	00
Bass Exp	00	C1/2KH	00
H Pulse	00	Mono	01
Matrix St	00	Scart	00
Bypass	00	Scart D	00
Vol L Sp	07	AM	00
Vol R Sp	07	SAA7283	INIT VALUE
Vol HP	00	Mon M1/M2	01
PII Sync	00	DM Select	01
Mute 3	01	SSWIT 123	07
Treble	08	Port 2	00
Bass	09	Mute Def	00
X Talk Adj	Adj	AMDIS	000
Mute 1	00	Е Мах	80
		E Min	01

# 2. TEST MODE 2:

available by pressing Test button twice, OSD 'TT' appears. The functions described below are available pressing the two numbers. To release the Test Mode 2, press 0 twice, or switch the TV into Stand-by Mode.

00	switch Test Mode 2 off	
ρ1	picture maximum	
32	picture minimum	
33	Volume 35%	
24	Volume 50%	
05	Volume 65%	
06	Volume 80%	
<b>)</b> 7	Ageing Condition (Volume min., Picture max., Brightness max.	
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)	
09	"Menu" Flag request	
10	Tenth entry is deleted	
11	dummy	
12	dummy	
13	dummy	
14	Forced AV 16:9 detection on/off	
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)	
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM.	
17	Preset Label for AV Sources	
18	RGB Priority on/off	
19	Clear all preset labels	
20	Tenth entry is deleted	
21	Sub Contrast	
22	Sub Colour	
23	Sub Brightness	
24	Set destination = U RGB Priority = Off	
25	Set destination = D RGB Priority = Off	
26	Set destination = B RGB Priority = On	
27	Set destination = K RGB Priority = Off	
28	Set destination = L RGB Priority = Off	
29	Set destination = E RGB Priority = Off	

Tenth entry is deleted	
. State State J. S. advictor	
Set Destination = A RGB Priority = On	
dummy	
Auto AGC	
N/S Pin Adjust	
Manual AGC Adjust	
dummy	
dummy	
To Activate Rotation Coil Adjustment	
Check Rotation Coil Adjustment	
Tenth entry is deleted	
Re-initialise NVM	
Production use only	
Initialise Geom Settings	
Initialise all favorite pages = 100	
Channel locks = off	
IR Channel Pressetting Mode The channel pressetting can be done by a Special IR Transmitter ( Ver 2 and above software only)	
dummy	
Set NVM testbyte to 44h	
Erase the NVM Testbyte (this byte detects already stored NVM's) After selecting this function, switch TV Off and On -> the NVM will be preset by $\mu$ -Controller.	

In Test Mode the Menu display is switchable by the Speaker-Off button.

**Note**: For Test Modes 41 - 49 it is necessary to ensure that the TV is set to Prog 59.

#### SUB BRIGHTNESS ADJUSTMENT

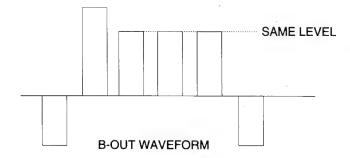
- 1. Input a Phillips pattern.
- 2. Enter into service mode and press 23.
- Adjust data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.

#### SUB CONTRAST ADJUSTMENT

- Input a video that contains a small 100% area on a Black Background.
- 2. Enter into service mode and press 01 to have PIC max followed by 21.
- 3. Connect oscilloscope to pin ① of CN703 (R OUT) and adjust HWB Red data of TDA8366 1 to obtain 2.3Vp-p.

#### SUB COLOR ADJUSTMENT

- 1. Input a PAL color bar signal.
- 2. Connect an oscilloscope to pin (3) of CN703 (B OUT) on the C board.
- 3. Enter into service mode and press 22.
- 4. Adjust data so that the right sides of the waveform are set to the same level.



#### STEREO SEPARATION ADJUSTMENT

- 1. Input a 1KHz stereo signal to the L-ch and a 400Hz stereo signal to the R-ch.
- 2. Enter into service mode and select the "Test Menu" to be TDA6612. (TDA6622 UK models)
- 3. Select the Stereo Xtalk Adjustment Menu, by using the Red (Next) and Green (Previous) buttons.
- 4. Monitor the Scart 1 L-channel output and adjust the data so that the R-channel sound is not detected in the L-channel.

# I.F. COIL ADJUSTMENT (T101) - B/G, D/K, I AND STANDARD FOR CONTINENTAL MODELS.

- Apply a 38.9MHz signal at 100dBuV to the input of SWF101.
- Receive a channel so that the I.C. is selected for negat modulation.
- 3. Measure the voltage at the AFT test point and adjust (T101) to obtain 2.4V +/- 0.2V.

# I.F. COIL ADJUSTMENT (T101) - I, STANDARD FOR U.K. MODELS.

- Apply a 39.5MHz signal at 100dBuV to the input of SWF101.
- 2. Receive a channel so that the I.C. is selected for negal modulation.
- 3. Measure the voltage at the AFT test point and adjust (T101) to obtain 2.4V +/- 0.2V.

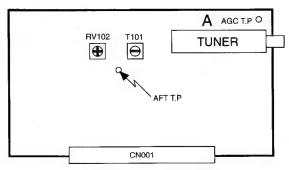
# L, BAND 1 ADJUSTMENT (RV102) - L, STANDA FOR FRENCH MODELS.

- 1. Apply a 33.95MHz signal at 100dBuV to the input of SWF101.
- 2. Receive a channel so that the I.C. is selected for posit modulation and system L band 1.
- 3. Measure the voltage at the AFT test point and adjust (RV102) to obtain 2.4V +/- 0.2V.

**Note**: Only adjust RV102 after T101 has been correctly adjusted.

### AGC ADJUSTMENT

- 1. Receive an off- air signal.
- 2. Enter the service mode, ("Test" "Test") and 35.
- 3. Adjust the data so that there is no snow or cross modulation visible on the screen.
- Change the receiving off-air channel, and confirm the above status.



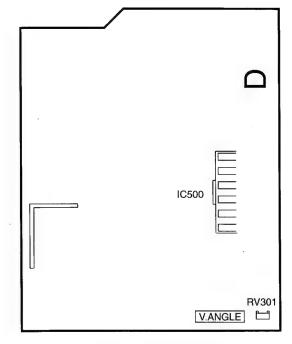
- A Board component side -

# **DEFLECTION SYSTEM ADJUSTMENT**

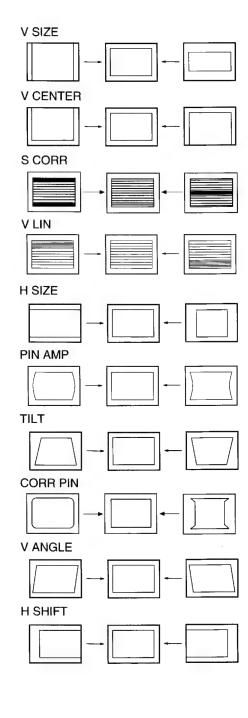
- Enter into service mode.
- Select and adjust each item in order to obtain the optimum image.

Item No	Adjustment item.	Data Amount
03	H SHIFT	ADJ.
04	H SIZE	ADJ.
05	PIN AMP	ADJ.
06	CORR PIN	ADJ.
07	TILT .	ADJ.
08	V LINEAR	ADJ.
09	V SIZE	ADJ.
OA	S CORR	ADJ.
0B	V CENTER -	ADJ.

Note: V ANGLE is adjusted by a Variable Resistor on the 'D' Board (RV301)



- D Board Component Side -



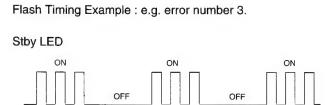
# 4-3. BE-3B SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-3B chassis is triggered in 1 of 2 ways: - 1: Bus busy or 2: Device failiure to respon IIC. In the event of one of these situations arrising the software will first try to release the bus if busy (Failiure to do so will report with continous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a dev is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) § Table 1., on fatal errors are reported with this method.

If a fatal error is found the set will simply stay in whichever state it was when the error occured, but if a non fatal error occur the set will try to continue operation.

Table 1

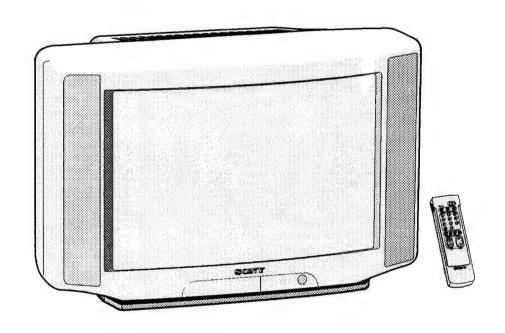
Device	LED Error Count	Fatal Error
NVM	29	V
Teletext	10	
Jungle	11	V
Video_sw	12	
Tuner	13	V
Nicam	14	
Audio_cont	15	1



# **SERVICE MANUAL**

# BE-3B CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-C2173B	RM-833	French	SCC-G85R-A	KV-C2171K	RM-833	OIRT	SCC-G86J-A
KV-C2171D	RM-833	AEP	SCC-G77T-A	KV-C2171KI	RM-833	Russian	SCC-G86S-A
KV-C2173E	RM-833	Spanish	SCC-G82R-A				







ITEM MODEL	Television System	Channel Coverage	Colour System
French	B/G/H	B/G/H VHF: E2-E12, UHF: E21-E69 Cable TV (1): S1-S41 Cable TV (2): S01-S05, M1-M10, U1-U10 Italy: A-H, H1, H2	PAL NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12, UHF: E21-E69 Cable TV (1): S1-S41 Cable TV (2): S01-S05, M1-M10, U1-U10 Italy: A-H, H1, H2 D/K VHF: R01-R12, UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H	B/G/H VHF: E2-E12, UHF: E21-E69 Cable TV (1): S1-S41 Cable TV (2): S01-S05, M1-M10, U1-U10 Italy: A-H, H1, H2	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12, UHF: E21-E69 Cable TV (1): S1-S41 Cable TV (2): S01-S05, M1-M10, U1-U10 Italy: A-H, H1, H2 D/K VHF: R01-R12, UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
Russian	B/G/H, D/K	B/G/H VHF: E2-E12, UHF: E21-E69 Cable TV (1): S1-S41 Cable TV (2): S01-S05, M1-M10, U1-U10 Italy: A-H, H1, H2 D/K VHF: R01-R12, UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)

MODEL	French	AEP	Spanish	OIRT	Russian
Power Consumption	75W	75W	75W	75W	75W

# **Specifications**

Picture tube

Hi-Black Trinitron

Approx. 54 cm (21 inches)

(Approx. 51 cm picture measured diagonally)

100° -deflection

### **Input/Output Terminals**

#### [REAR]

21-pin Euro connector (CENELEC standard)

- Inputs for audio and video signals

inputs for RGB

- Outputs of TV video and audio signals

→2/-- 21-pin Euro connector

- inputs for audio and video signals
- inputs for S video
- Outputs for audio and video signals (selectable)

### [FRONT]

3 Video input - phono jack

• 3 Audio inputs - phono jacks

3 S video input - 4-pin DIN

Ω Headphone jack - Stereo minijack

Sound output

2x20W (Music power)

Approx.

652 x 433 x 488 mm

Weight

Approx. 26 kg

Supplied accessories

RM-833 Remote Commander (1)

IEC designation R6 battery (1)

Other features

Fastext

TOPtext (KV-C2173B/C2171D/C2171K/C2171KR only)

Nicam (KV-C2173B/C2173E only)

#### [RM-833]

Remote control system infrared control

Power requirements

1.5V dc

1 battery IEC designation

R6 (size AA)

Dimentions

Approx. 65 x 222 x 21 mm (w/h/d)

Weight

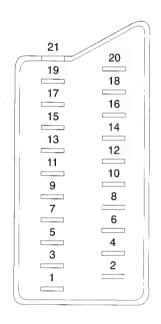
Approx. 157g (Not including battery)

Design and specifications are subject to change without notice.

Model name	KV-C2173B	KV-C2171D	KV-C2173E	KV-C2171K	KV-C2171KR
Item					
Pal Comb	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF
NICAM	ON	OFF	ON	OFF	OFF
RGB Priority	ON	ON	ON	OFF	OFF
Scart 1	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	ON
Norm I	OFF	OFF	OFF	OFF	OFF
Norm D/K	OFF	ON	OFF	ON	ON
Norm AUS	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF
Language Preset	French	German	Spanish	OIRT	Russian

21 pin connector ( 3 1 / 3 2 / 3 2 )

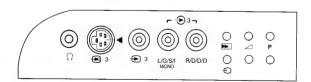




Pin No	1	2	Signal	Signal level
1	0	0	Audio output B (right)	Standard level: 0.5Vrms Output impedance:less than 1kohm*
2	0	0	Audio input B (right) Standard level:0.5Vrms Input impedance:More than 10kol	
3	0	0	Audio output A (left)	Standard level:0.5Vrms Output impedance:less than 1kohm*
4	0	0	Ground (audio)	
5	0	0	Ground (blue)	
6	0	0	Audio input A (left)	Standard level:0.5Vrms Input impedance:More than 10kohms*
7	0	•	Blue input	0.7V±3dB, 75ohms, positive
8	0	0	Function select (AV control)	High state (9.5—12V):Part mode Low state (0—2V):TV mode Input impedance:More than 10kohms Input capacitance:Less than 2nF
9	0	0	Ground (green)	
10	0	0	Open	
11	0	•	Green	Green signal:0.7V±3dB. 75ohms, positive
12	0	0	Open	
13	0	0	Ground(red)	
14	0	0	Ground (blanking)	
15	0	_	Red input	0.7V±3dB, 75ohms, positive
	_	0	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	0	•	Blanking input (Ys signal)  High state (1—3V) Low state (0—0.4V) Input impedance:75ohms	
17	0	0	Ground (video output)	
18	0	0	Ground (video input)	
19	0	0	Video output	1V±3dB, 75ohms, positive Sync:0.3V(-3, +10dB)
20	0		Video input	1V±3dB, 75ohms, positive Sync:0.3V(-3, +10dB)
	_	0	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync:0.3V(-3, +10dB)
21	0	0	Common ground (plug, shield)	

○ Connected ● Not Connected (open) \*at 20Hz - 20kHz

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3/+10 dB
4	C (S signal) input	0.3V ± 3dB 75 ohm , positive Sync.



#### **TABLE OF CONTENTS**

Sec	<u>ction</u>	<u>Title</u>	<u>Page</u>	Sec	<u>ction</u>	<u>Title</u>	<u>Page</u>
1.	GEN	IERAL					
	Get	tting Started	6	5.	DIA	AGRAMS	
		vanced TV Operations			5-1.	Block Diagram	. 25
		vanced Presetting Functions			5-2.	Circuit Boards Location	
		letext			5-3.	Schematic Diagrams and Printed Wiring Boards	. 30
	For	r Your Information	10			* H1 Board	
						* H2 Board	. 31
						* H3 Board	. 31
2.	DISA	ASSEMBLY				*F1 Board	. 32
	2-1.	Rear Cover and Speaker Removal	11			* D Board	. 35
	2-2.	Chassis Assy and H Bracket Removal	11			* A Board	. 40
	2-3.	Service Position	12			*C Board	. 50
	2-4.	A Board Removal	12		5-4.		
	2-5.	Extension Board	13				
	2-6.	Wire Dressing	13	6.	EXF	PLODED VIEWS	
	2-7.	Picture Tube Removal	14		6-1.	Chassis	. 55
					6-2.	Picture Tube	. 56
3.	SET	-UP ADJUSTMENTS					
	3-1.	Beam Landing	15	7.	ELE	CTRICAL PARTS LIST	. 57
	3-2.	Convergence	16				
	3-3.	Focus	18				
	3-4.	White Balance	18				
4.	CIRC	CUIT ADJUSTMENTS					
	4-1.	Electrical Adjustments	19				
	4-2.	Test Mode 2:					
	4-3.	BE-3B Self Diagnostic Software					
		-					

#### CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

## WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

#### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \(\tilde{\Lambda}\) ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

#### ATTENTION

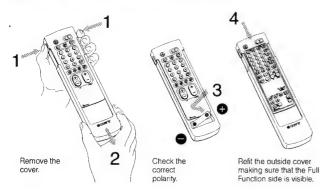
APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

#### ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

#### ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE A SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.



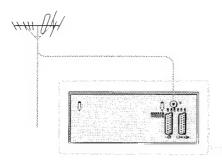
#### **About Battery Life**

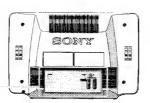
Under normal operation, a battery will last up to half a year.

Always remember to dispose of used battery in an environmental

## Connecting the Aerial

Connect the aerial to the TF socket at the rear of the TV. (cable not supplied)





The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

## Choosing a Language

(See inside of front cover and back cover)

Depress ① 🖾 on the TV.

The TV turns on. If the standby indicator B on the TV is lit, press O 3 or any number button 4 on the Remote

2 Press MENU on the Remote Commander.
The SELECT LANGUAGE screen appears.

MEN.

The Press one of the colour buttons on the Remote Commander to select a language (Press the white button To display other language alternatives). The SELECT LANGUAGE screen clears and all subsequent menus appear in the chosen language.

SELECT LANGUAGE **▶** ENGLISH DEUTSCH
 FRANÇAIS ITALIANOMORE

SELECT COL BUTTON

Note: From the second time when you turn on the TV, the MENU screen appears instead of the SELECT LANGUAGE screen. Press the yellow button 1 then press the white button 1 to redisplay the SELECT LANGUAGE screen.

### **Tuning in to Channels**

You can tune in up to 100 channels to programme positions either automatically or manually.

A single button press allows all receivable

channels to be tuned. Use if you are unfamiliar with the channel numbers of

manual tuning: Use if you are familiar with the channel

numbers of stations.

Choose the more appropriate way for you

#### Tuning in to Channels Automatically

There are two possibilities for auto tuning;

A. On the TV: hold down 🖭 🖪 on the front of the TV for

Note: The button 🖭 🖪 for Automatic Presetting of channels is protected to prevent accidental usage. Use the tip of a pencil to press it.

B. On the Remote Commander: as follows

#### Press MENU Q.

? Press the white button .

Yeld down the red button for 2 seconds,

Note: Press the green button to cancel.

#### Tuning in to Channels Manually

Press MENU 2.

The MENU screen appears.



? Press the white button ® to select PRESET.

■ The PRESET screen appears.

PRESET ► AUTO TUNING • MANUAL TUNING PROGR. EXCHANGE EDIT PROGR. NAME
 FINE TUNE

3 Press the green button (a) to select MANUAL TUNING The MANUAL TUNING screen appears.

MANUAL TUNING 0LB/G C2L-SONY

ENTER PROGR. NO. USE NO BUTTONS OR HANGE BY MENU +

#### Press the number buttons @ or MENU +/- @ to select a programme position.

If you use the number buttons . enter a double-digit number, (e.g. for programme number 4, first press 0, then 4)

# 5 Press the green button .

Note: Use MENU +/- @ to select TV system. You can alternatively select input sources which may be assigned to programme positions. The display changes as follows:

MANUAL TUNING SELECT SYSTEM/INPUT

 $B/G \rightarrow D/K \rightarrow AV1 \rightarrow RGB \rightarrow AV2 \rightarrow YC2 \rightarrow AV3 \rightarrow YC3$ 

# f Pess the green button .

Note: If a video input source is selected in step 5, this is now Refer to step 4 to tune other programme positions.

MANUAL TUNING 01 B/G C21 -SONY ENTER CHANNEL NO. USE NO. BUTTONS OR SEARCH BY MENU +/-

#### 7 If you have selected B/G in step 5, press the red button @ to select C (regular channel) or S (cable channel).

# O Press the number buttons ① or MENU+/- ② to select the Channel number.

If you use the number buttons 4, enter a double-digit number. (e.g. for channel 23, first press 2, then 3)

#### O Press the green button To to store.

Note: If you want to preset other channels, repeat steps 4 to 9.

## Press MENU • twice to return to the normal screen. Note: You can skip unused programme positions when selecting

programmes with the PROGR +/- buttons 19. Press the red button 10 to skip in step 4. However, the skipped programmes may still be called up when you use the number buttons.

### **Basic TV Operations**

#### Turning the TV on and off

Turning on Depress ① A on the TV.

Turning off temporarily

Press () on the Remote Commander. The TV enters standby mode and the standby indicator B on the front of the TV lights up.

Turning on again

Press O 3. PROGR +/- 13, or one of the number buttons 3 on the Remote Commander.

Turning off completely Depress () A on the TV.

Note: It is recommended to use ① A to turn off the TV. This could help you save energy.

Selecting TV Programmes

Press PROGR +/- 19 or press the number buttons 4.

To select a double-digit number

Press -/-- 5, then the number buttons 4

Adjusting the Volume

Press \_ +/- 10.

#### Muting the Sound

Press ox 0

To resume normal sound, press of again.

#### Displaying the On-screen Indications

Press 
 once to display the on-screen indications. Press again to make the indications disappear.

#### Operating the TV Using the Buttons on the TV

With the buttons on the TV, you can adjust or select the functions

Press \_ +/- D to adjust the volume.

Press P +/- To select programme numbers or to turn the TV on from the standby mode

Press - I to select the input source.

Press E1 to preset channels automatically.

# Advanced TV Operations

## Operating the Menu System

You can adjust picture and sound, preset channels to programme positions and utilise other convenient features by using the following menu system.

Press:	to:
MENU (VENU)	enter the MENU screen
2 a colour button ®	select an item you want to change (The selected item is marked by a triangle.)
3 MENU +/-	change (or adjust) the contents of the item
4 MENU O	return to the MENU screen
5 MENU • again	return to the normal screen

Press MENU 7 once or twice whenever you want to return to the normal screen.

Note: When selecting menus, the picture becomes darker. If, however, an item in the PICTURE ADJUSTMENT menu is selected, normal level of TV picture is restored to allow the best adjustment

## Adjusting the Picture and Sound

Although picture and sound are adjusted at the factory you can adjust them to suit your own taste.

Press MENU @.

The MENU screen appears.

? Press the red button @ to select PICTURE or the green button to select SOUND.

? Press the respective colour button @ to select an item.

⚠ Press MENU +/- 1 to adjust.

5 Press MENU © twice or wait until the menu displays disappear automatically to return to the normal screen.

#### PICTURE ADJUSTMENT

(First Page)

PICTURE ADJUSTMENT • 9 INHIIII.... • © IIIIIIII..... • D IIIIIIIII..... SELECT COL BUTTON

ess — More
ess —+— More
ess —+— More
Darker -+ Brighter
Softer Sharper
Next page of

 $\infty$ 

BACK

Press colour button	Effect
Red: For Colour Tone	Normal ⇒Warm (reddish colour tone) ⇒Cool (blueish colour tone)
<b>Green:</b> For Format	Normal: Normal setting 16:9 Wide screen effect
Blue: For Hue control (only for NTSC video signals)	Reddish —+— Greenish
White:	Back to first page of PICTURE ADJUSTMENT

Note: Press →•← ® on the Remote Commander to reset to the factory preset levels for picture and sound.

#### SOUND ADJUSTMENT

(First Page)

SOUND ADJUSTMENT • 4 HOUR.... • 5 HOUR.... • 2 ORIOL.... • NORE SELECT COL BUILDING ADJUST BY MENU +/

Press colour button	Effect
Red: For Volume ∠	Less — More
Green: For Treble ∮	Less — Hore
Yellow: For Bass 2:	Less — More
Blue: For Balance ►⊿	More left – more right
White:	Next page of SOUND ADJUSTMENT

#### SOUND ADJUSTMENT

(Second Page)

SOUND ADJUSTMENT SPACE SOUND OFF LOUDNESS OFF
 4 STERFO
 RESET BACK SELECT COL BUILDIN CHANGE BY MENU -

Press colour button	Effect	
Red:		
For Space Sound	OFF: normal sound ON: for a special acoustic sound effect	
Green;		
For Loudness	OFF: normal sound ON: when listening to low volume sound	
Yellow:		
For Stereo/Dual	Stereo ⇒ Mono A (left channel) ⇒ Mono B (right channel) ⇒ Mono	
Blue:		
For Reset	Resets picture and sound to the factory preset levels.	
White:	Back to first page of SOUND ADJUSTMENT	

Note: Press →•← ③ on the Remote Commander to reset to the factory preset levels for picture and sound.

# **Using Special Features**

With your TV you can utilise special features such as Parental Lock or Sleep Timer.

Press MENU @ The MENU screen appears.

MENU

? Press the yellow button @ to select FEATURES.

 ${f 3}$  Press the respective colour button  ${f \Phi}$  to select an item.

A Press MENU +/- 9 to change.

5 Press MENU © twice or wait until the menu displays disappear automatically to return to the normal screen.

**FEATURES** FEATURES ► SLEEP TIMES OFF PARENTAL LOCK OFF
 IV BUTTON LOCK OFF
 DEMO MODI LANGUAGE SELECTICOL BUTTON CHANGE BY MENU +/-

Press colour button Effect Red: For Sleep Timer OFF ⇒ 0:30 ⇒ 1:00 ⇒ (Automatic switch of 1:30 => 2:00 (hours) function) After the selected time the TV set switches itself automatically into standby mode Green: OFF: Normal setting

For Parental Lock (For preventing children from watching programmes which you consider unsuitable)

For Demo Mode

ON: The TV-channel you are watching is now blocked. In this way you can prevent undesirable broadcasts from appearing on the screen.

Yellow For TV Button Lock OFF: Normal setting ON: The buttons on the TV do not function anymore. (The Remote Commander still operates)

> ON: A sequence of menu pictures is displayed. Press any button on the Remote Commander to stop the function.

White: For Language The SELECT LANGUAGE screen appears.

# **Advanced Presetting Functions**

#### **Exchanging Programme Positions**

You can exchange the programme positions to a preferred order (example: exchange programme 09 (channel C21) with programme 15 (channel C24)).

Press MENU @.

The MENU screen appears

MENU

7 Press the white button 1.

L The PRESET screen appears.

**3** Press the yellow button **①**. The PROGR. EXCHANGE SCREEN appears.

PROGR. EXCHANGE 01 B/G C21 - SONY • NEXT CHANNEL • PREVIOUS CHANNEL SELECT COL BUTTON

Press the white button @ repeatedly until the desired 4 programme number (09) appears.

5 Press the red or the green button @ repeatedly until the desired channel number (C24) appears.

Press the white button @ to store.

Now the exchange has been completed. Channel C24 is tuned in to programme 09 and channel C21 is tuned in to programme 15.

7 Press MENU @ twice to return to the normal screen.

#### **Editing Programme Names**

You can edit the programme names up to five letters.

Press MENU @

MENU The MENU screen appears.

2 Press the white button **①**. The PRESET screen appears.

? Press the blue button .

The EDIT PROGR. NAME screen appears. The first character flashes.

> EDIT PROGR. NAME 01 B/G C21 - SONY • NEXT LETTER CHANGE BY MENU #/-

# steps 1 to 7.

9

Fine Tuning You can adjust the receiving conditions by the FINE TUNE function

The programme name is stored, and the normal screen

appears. To edit another programme name, repeat

Press MENU @ The MENU screen appears.

MENI

? Press the white button . The PRESET screen appears.

3 Press the white button @ again.
The FINE TUNE screen appears.

FINE TUNE EXITAMATOR ADJUST BY MENULE.

Press MENU +/- 1 to adjust the receiving condition.

#### Press the red button @ to store the adjustment, or press U the green button @ not to store.

Now the normal screen appears. If you have pressed the green button, the fine tuned condition is cancelled once you choose another programme.

Note: If the FINE TUNE screen disappears automatically before you press the red button 10, the fine tuned condition is not stored. Repeat steps 1 to 5.

#### Tuning in to a Channel Temporarily

You can tune in to a channel temporarily, even when it has not been preset.

Press C @ on the Remote Commander.

For cable channels press C to twice. The indication "C" (or "S" for cable channels) appears on the screen.

1 Enter a double digit channel number using the number buttons (e.g. for channel 23, first press 2, then 3).

The channel appears. However, the channel is not stored.

#### **Teletext Operation**

TV stations broadcast teletext programmes via the TV channels. For basic operation of teletext, use the simple side of the Remote Commander. For the advanced features of teletext, use the buttons indicated in green on the full function side of the Remote Commander.

#### Basic Teletext Operation Switching Teletext on and off

Select the channel which carries the teletext service you wish to view.

2 Press (a) to display Teletext.

If no teletext signal is broadcast, the indication P100 is displayed on a black



# 3 input three digits for the page number using the number buttons 3.

The numbers are displayed on the screen and the requested page appears in a few seconds

Note: If you make a mistake, type in any three digits, then reenter the correct page number

Press O to return to the TV mode.

- the TV mode, then repeat steps 1 to 3.
- . If the signal of a TV channel is weak, teletext errors may occur.

#### Advanced Teletext Operation **Using Fastext**

With Fastext you can access pages with one button press. When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons 6 on the Remote Commander.

Press the corresponding colour button 6 on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed in a few seconds

#### Requesting the Index page

Press (1) (7). The Index page appears.

Accessing the next or preceding page

Press (PAGE -) or (PAGE +) (10). The next or the preceding page appears on the screen.

Superimposing the teletext display on the TV picture

Press @ 10 once if you are in text mode or press @ 10 twice if in TV mode.

To return to the normal teletext display press (F) (1) twice.



Preventing a teletext page from being updated or changed Press (HOLD) 2. The HOLD symbol (19) appears on the screen and the selected subpage is held until you press 🖹 0 to cancel

#### Enlarging the teletext display

Press (2) Once to enlarge the upper half. Press twice to

enlarge the lower half. Press again to restore the normal display.





Revealing concealed information (e.g. answers to a quiz) Press (7) (REVEAL) 10. The information is revealed. Press (7) 10 again to conceal the information.

#### Watching TV while waiting for a requested page to be displayed

Request a new teletext page.

#### ↑ Press Ø (TEXT CL) Ø.

• The TV programme is displayed and the symbol (a) is displayed at the top of the page.

Note: When the requested page is available the page number is displayed at the top of the screen.

7 Press (a) to view the page.

#### To cancel the request

cancelled. Press O 3 to resume TV mode.

#### Using the Favourite Page system

You can store up to four of your favourite teletext pages per programme with the help of the Favourite page system. In this way you have quick access to the pages you watch frequently.

#### Storing the Favourite Pages

- Select the page you would like to store using the number buttons 4
- n Press → @ twice.

La The colour prompts at the bottom of the screen flash.

#### n Press any of the colour buttons o on the Remote Ocmmander to store the selected page.

The page is now stored on this button.

Repeat steps 1 to 3 for the other 3 pages available.

#### Displaying the Favourite pages

Press -> 1.

#### 1 Press the colour button (1) corresponding to the colour prompt onto which the desired page is stored.

The page is requested. (It may take a few seconds to be

Note: Step 1 must be taken before every favourite page selection otherwise the normal Fastext facility operates.

#### Using the Time Function in the TV mode

Press @ @ to request the time. Press again to cancel the

Note: This function is available only when teletext is broadcast.

ō

### **Connecting Other Equipment**

You can connect optional audio/video equipment to this TV such as VCRs, video disc players, cameras or stereo systems.

Connector	Acceptable input signal	Available output signal
-⊚1 M (AV1/RGB)	Audio/video and RGB signal	Audio/video signal from TV Tuner
(AV2/YC2)	Audio/video and S-video signal	Audio/video signal from selected source
-Đ3/-Đ3 <b>G H</b> (AV3)	Audio/video signal	No outputs
-Ð3/-3 <b>⊡</b> (YC3)	Audio/S-video signal	No outputs

To watch a video input picture, press - 2 until the desired video input appears

To return to the normal TV picture, press - 2 repeatedly or press 🔾 3.

If you have a decoder, connect it to - 1 M

#### Connecting a VCR Using the TV Aerial Terminal

Connect the aerial output of the VCR to the aerial terminal III of the TV. It is recommended to tune in the VCR signal to programme number "0". For details, see "Tuning in to Channels Manually" on page 20.

#### S video input (Y/C input) II II.

Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals.

Separating the Y and C signals prevents them from interfering with each other and therefore improves the picture quality (especially luminance). This TV is equipped with 2 video input terminals through which these signals can be input directly.

#### Checking and Selecting the Input and Output Sources Using the Menu

You can display a menu screen to see which input and output source are selected. You can also change the selecting using this

#### Checking the Input and Output Sources

Press MENU @.

The MENU screen appears

2 Press the blue button 10 to select INPUT/OUTPUT.
The INPUT/OUTPUT screen appears.



#### Selecting an Input Signal

Press the red button 10 to select INPUT. Press MENU +/- 10 to select the desired input source.

You can select among the following sources:

 $TV \leftrightarrow AV1 \leftrightarrow RGB \leftrightarrow AV2 \leftrightarrow YC2 \leftrightarrow AV3 \leftrightarrow YC3$ 

#### Selecting an Output Signal

The 32/3 2 connector unoutputs the source input from the other connectors. Press the green button 10 to select OUTPUT. Press MENU +/- 9 to select the desired output source. You can select among the following sources:

TV ↔ AV1 ↔ AV2 ↔ YC2 ↔ AV3 ↔ YC3

Note: Press Twice or wait until the menu display disappears automatically to return to the normal screen.

## **Remote Control of Other Sony** Equipment

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as: Beta, 8 mm or VHS VCRs or video disc players.

#### Tuning the Remote Comander to the equipment

Set the VTR 1/2/3 MDP selector @ according to the

equipment you want to control:

VTR 1: Beta or VCR VTR 2: 8mm VCR VTR 3: VHS VCR MDP: Video Disc Player

#### 1 Use the buttons 1 to operate the additional equipment.

#### Notes:

- . If your video equipment is furnished with a COMMAND MODE selector; set this selector to the same position as the VTR 1/2/3 MCP selector on the TV Remote Commander.
- If the equipment does not have a certain function, the corresponding button on the Remote Commander will not
- When you use the 
   (record) button, make sure to press this button and the one to the right of it simultaneously.

## **Using Headphones**

You can utilise headphones. Connect them to the headphone jack , then the sound from the speakers goes off.

Note: You can't control the sound adjustment except for volume.

#### For your Information

#### Troubleshootina

Here are some simple solutions to problems which may affect the picture and sound.

#### No picture (screen is dark), no sound

- · Plug the TV in.
- Press ( A on the TV. (If the standby indicator B is lit, press O 3 or any number button 4 on the Remote Commander.)
- Check if the selected video source is on. . Turn the TV off for three or four seconds and then turn
- it on again using ① A. Poor or no picture (screen is dark), but good sound

 Press MENU to enter the MENU screen, and press the red button T, then adjust T and D.

#### Good picture but no sound

- Press ∠ + 1.
- If is displayed on the screen, press is 0.

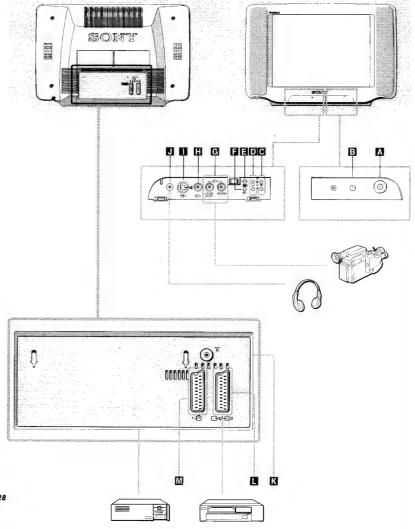
#### No colour for colour programmes

· Press MENU To to enter the MENU screen, and press the red button (1), then adjust (3).

#### Remote Commander does not funcion

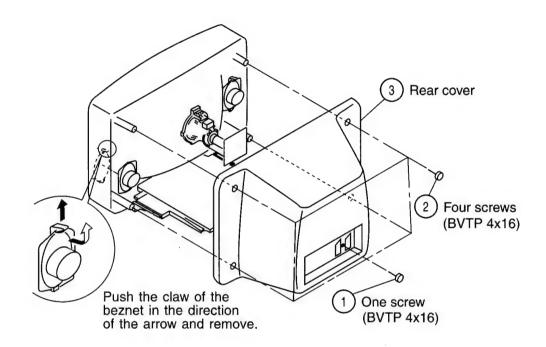
· Replace the battery.

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

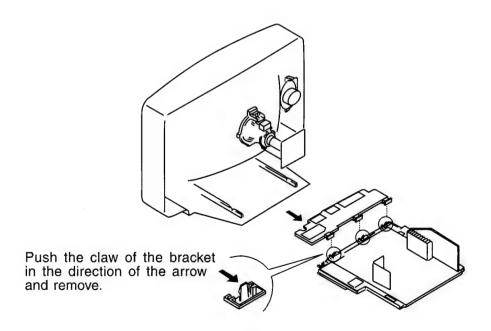


# SECTION 2 DISASSEMBLY

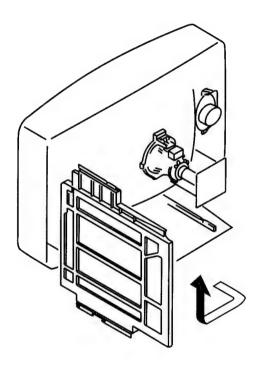
# 2-1. REAR COVER AND SPEAKER REMOVAL



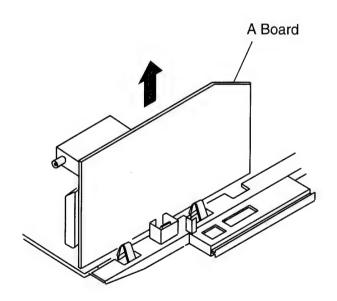
# 2-2. CHASSIS ASSY AND H BRACKET REMOVAL



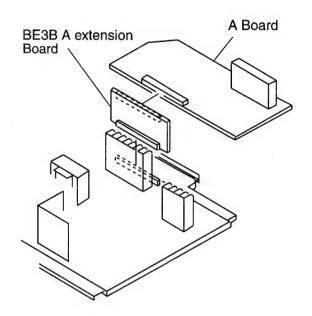
# 2-3. SERVICE POSITION



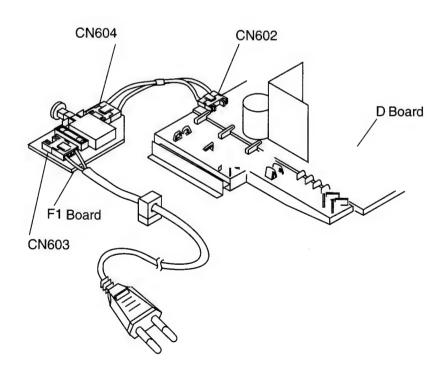
# 2-4. A BOARD REMOVAL



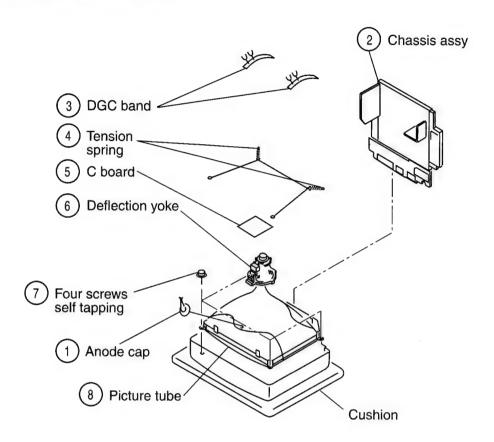
# 2-5. EXTENSION BOARD



# 2-6. WIRE DRESSING



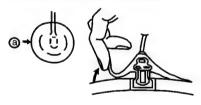
### 2-7. PICTURE TUBE REMOVAL



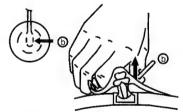
### REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

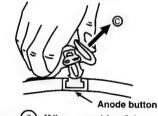
### \* REMOVING PROCEDURES.



1 Turn up one side of the rubber cap in the direction indicated by the arrow a



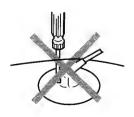
Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)

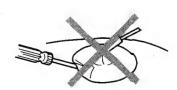


When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow (C)

### HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material!
- 2 Don't press the rubber hardly not to hurt inside of anode-caps!
  - A metal fitting called as shatter-hook terminal is built into the rubber.
- 3 Don't turn the foot of rubber over hardly!
  The shatter-hook terminal will stick out or damage the rubber.





# SECTION 3 SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings:

Contrast	 80%	(or remote control
	norma	al)
X Brightness	50%	

- Carry out the following adjustments in this order:
- 1. Beam landing
- 2. Convergence
- 3. Focus
- 4. White balance

Note: Testing equipment required.

- 1. Colour bar/pattern generator
- 2. Degausser
- 3. DC power supply
- 4. Digital multimeter
- 5. Oscilloscope

#### **Preparation:**

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

### 3-1. BEAM LANDING

- Input the white signal with the pattern generator.
   CONTRAST BRIGHTNESS normal
- 2. Set the pattern generator raster signal to red.
- 3. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 3-3)
- 4. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
- 5. Switch the raster signal to blue, then to green and verify the condition.
- 6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
- 7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

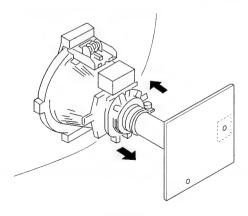


Fig. 3-1



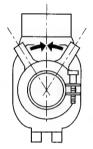
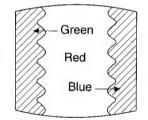


Fig. 3-3



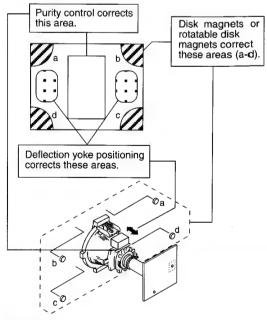


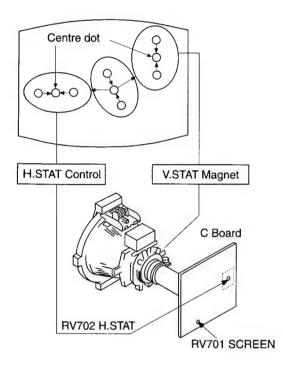
Fig. 3-4

### 3-2. CONVERGENCE

### Preparation:

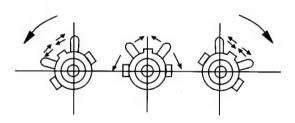
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

### (1) Horizontal and vertical static convergence

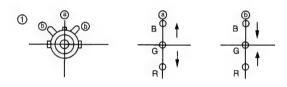


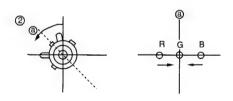
- 1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
- (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
- 3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
  (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

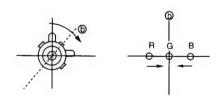
• Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

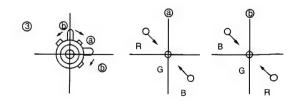


4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.

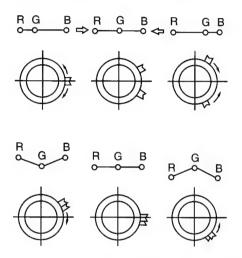




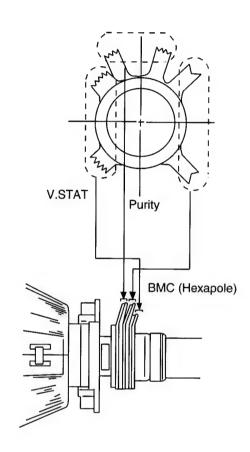




• Operation of BMC (Hexapole) Magnet



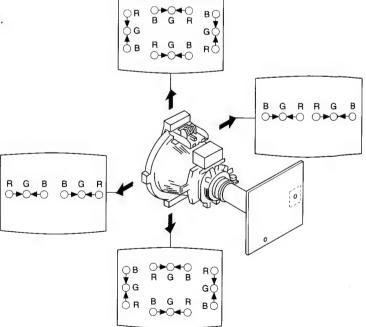
The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
 Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).



### (2) Dynamic convergence adjustment.

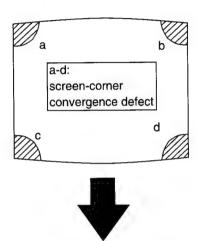
### **Preparation:**

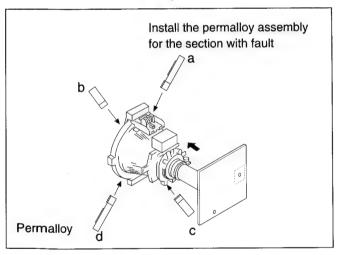
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- 1. Slightly loosen the deflection yoke screws.
- 2. Remove the deflection yoke spacer.
- 3. Move the deflection yoke as shown in the figure below and optimize the convergence.
- 4. Tighten the deflection yoke screws.
- 5. Re-install the deflection yoke spacer.



### (3) Screen corner convergence.

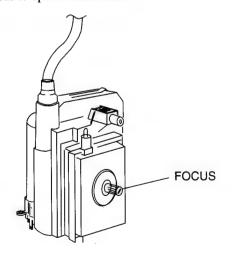
If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.





### 3-3. FOCUS

Adjust the focus to optimize the screen.



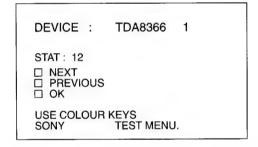
### 3-4. WHITE BALANCE

### Screen G2 Setting

- 1. Input the dot signal from the pattern generator.
- 2. Set the picture brightness control to its lowest level.
- 3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
- 4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

### White balance adjustment

- 1. Receive an all-white signal.
- Enter into service mode. (Refer to the section 4
  "Electrical Adjustment" on how to enter service
  mode.)
- 3. Select TDA8366 1 on menu.



- 4. Press the White button on the Remote Commander to enter into the device Menu.
- 5. Press the Red button 10 times "Next" "Next" "Next" to select HWB RED, adjust to 32.
- Press the Red button to select HWB GREEN, adjust with the + and - menu buttons so that the white balance becomes optimum.
- 7. Press the Red button to select HWB BLUE, adjust with the + and menu buttons so that the white balance becomes optimum.
- 8. Press the TV button twice on the Remote Commander to store the data and return to TV operation.

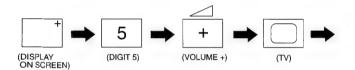
# SECTION 4 CIRCUIT ADJUSTMENTS

### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-833.

### HOW TO ENTER INTO SERVICE MODE

- 1. Turn on the main power switch of the set and enter into standby mode.
- 2. Press the following sequence of buttons on the Remote Commander.



"TT" will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.

DEVICE NAME
STAT : xxxx  NEXT PREVIOUS OK
USE COLOUR KEYS SONY TEST MENU.

4. Press the Red (Next) and Green (Previous) buttons to select the device corresponding to the adjustment item from the table. Then press the White button (OK).

DEVICE NAME
00 ADJUSTMENT: xxx
□ NEXT □ PREVIOUS
SELECT COL.BUTTON CHANGE BY MENU +/-

- 5. Press the Red (Next) or Green (previous) buttons to select the adjustment item. Then press the and buttons to change the data to comply with each standard.
- 6. Turn off the power to quit the service mode when adjustments are completed.

Initial Conditions for setup of TDA8366, TDA6612 and SAA7283.

TDA8366 1	INIT VALUE	TDA8366 2	INIT VALUE
Hue	31	Interlace	00
H Shift	Adj	Sync Mode	00
H Size	Adj	Col Dec	00
Pin Amp	Adj	Vert Div	00
Corn Pin	Adj	Vid ID	00
Tilt	Adj	EHT Track	01
V.Linear	Adj	En V Grd	00
V.Size	Adj	Serv Blk	00
S.Corr	Adj	OVP Mode	00
V.Cent	Adj	Aspect R	00
HWB Red	Adj	Start Freq	00
HWB Green	Adj	Y/C Input	00
HWB Blue	Adj	PAL/NTSC	00
Peaking	8	Xtal PLL	00
Bright	32	Y Delay	07
Colour	32	RGB Blk	00
Picture	37	Noise Cor	00
AGC Set	00	Fast Blk	01
Srce Sel 1	00	AFC Wind	00
Srce Sel 2	00	IF Sensty	00
Time Con	03	Mod Std	00
Xtal Ind	03	Vid Mute	01
FF Freq	02		

TDA6612	INIT VALUE	TDA6612	INIT VALUE
MPX Per	00	Mute 2	01
Quasi St	00	C1/2LS	00
Bass Exp	00	C1/2KH	00
H Pulse	00	Mono	01
Matrix St	00	Scart	00
Bypass	00	Scart D	00
Vol L Sp	07	AM	00
Vol R Sp	07	SAA7283	INIT VALUE
Vol HP	00	Mon M1/M2	01
Pll Sync	00	DM Select	01
Mute 3	01	SSWIT 123	07
Treble	08	Port 2	00
Bass	09	Mute Def	00
X Talk Adj	Adj	AMDIS	00
Mute 1	00	E Max	80
		E Min	01

### 4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD 'TT' appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press 0 twice, or switch the TV into Stand-by Mode.

00	switch Test Mode 2 off		
01	picture maximum		
02	picture minimum		
03	Volume 35%		
04	Volume 50%		
05	Volume 65%		
06	Volume 80%		
07	Ageing Condition (Volume min., Picture max., Brightness max.		
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)		
09	"Menu" Flag request		
10	Tenth entry is deleted		
11	dummy		
12	dummy		
13	dummy		
14	Forced AV 16:9 detection on/off		
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)		
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM.		
17	Preset Label for AV Sources		
18	RGB Priority on/off		
19	Clear all preset labels		
20	Tenth entry is deleted		
21	Sub Contrast		
22	Sub Colour		
23	Sub Brightness		
24	Set destination = U RGB Priority = Off		
25	Set destination = D RGB Priority = Off		
26	Set destination = B RGB Priority = On		
27	Set destination = K RGB Priority = Off		
28	Set destination = L RGB Priority = Off		
29	Set destination = E RGB Priority = Off		

30	Tenth entry is deleted		
31	Set Destination = A RGB Priority = On		
32	dummy		
33	Auto AGC		
34	N/S Pin Adjust		
35	Manual AGC Adjust		
36	dummy		
37	dummy		
38	To Activate Rotation Coil Adjustment		
39	'Check Rotation Coil Adjustment		
40	Tenth entry is deleted		
41	Re-initialise NVM		
42	Production use only		
43	Initialise Geom Settings		
44	Initialise all favorite pages = 100		
45	Channel locks = off		
46	IR Channel Pressetting Mode The channel pressetting can be done by a Special IR Transmitter ( Ver 2 and above software only)		
47	dummy		
48	Set NVM testbyte to 44h		
49	Erase the NVM Testbyte (this byte detects already stored NVM's) After selecting this function, switch TV Off and On -> the NVM will be preset by μ-Controller.		

In Test Mode the Menu display is switchable by the Speaker-Off button.

**Note**: For Test Modes 41 - 49 it is necessary to ensure that the TV is set to Prog 59.

### SUB BRIGHTNESS ADJUSTMENT

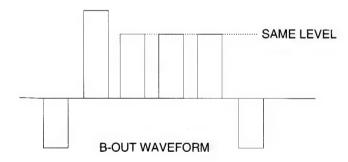
- 1. Input a Phillips pattern.
- 2. Enter into service mode and press 23.
- Adjust data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.

### SUB CONTRAST ADJUSTMENT

- 1. Input a video that contains a small 100% area on a Black Background.
- 2. Enter into service mode and press 01 to have PIC max followed by 21.
- 3. Connect oscilloscope to pin ① of CN703 (R OUT) and adjust HWB Red data of TDA8366 1 to obtain 2.3Vp-p.

### SUB COLOUR ADJUSTMENT

- 1. Input a PAL colour bar signal.
- 2. Connect an oscilloscope to pin ③ of CN703 (B OUT) on the C Board.
- 3. Enter into service mode and press 22.
- 4. Adjust data so that the right sides of the waveform are set to the same level.



#### STEREO SEPARATION ADJUSTMENT

- 1. Input a 1KHz stereo signal to the L-ch and a 400Hz stereo signal to the R-ch.
- 2. Enter into service mode and select the "Test Menu" to be TDA6612.
- 3. Select the Stereo Xtalk Adjustment Menu, by using the Red (Next) and Green (Previous) buttons.
- 4. Monitor the Scart 1 L-channel output and adjust the data so that the R-channel sound is not detected in the L-channel.

### I.F. COIL ADJUSTMENT

- Apply a 38.9MHz signal at 100dBuV to the input of SWF101.
- 2. Receive a channel so that the I.C. is selected for negative modulation.
- 3. Measure the voltage at the AFT test point and adjust (T101) to obtain 2.4V +/- 0.2V.

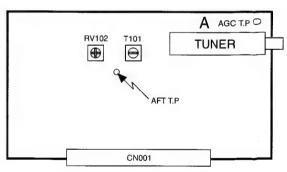
# L, BAND 1 ADJUSTMENT (RV102) - L, STANDARD FOR FRENCH MODELS.

- Apply a 33.95MHz signal at 100dBuV to the input of SWF101.
- 2. Receive a channel so that the I.C. is selected for positive modulation and system L band 1.
- 3. Measure the voltage at the AFT test point and adjust (RV102) to obtain 2.4V +/- 0.2V.

**Note**: Only adjust RV102 after T101 has been correctly adjusted.

### **AGC ADJUSTMENT**

- 1. Receive an off- air signal.
- 2. Enter the service mode, ("Test" "Test") and 35.
- 3. Adjust the data so that there is no snow or cross modulation visible on the screen.
- 4. Change the receiving off-air channel, and confirm the above status.



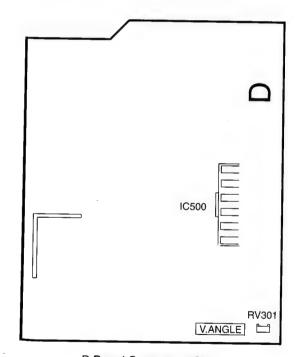
- A Board component side -

# DEFLECTION SYSTEM ADJUSTMENT

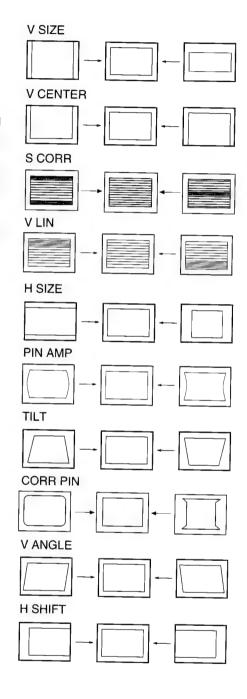
- 1. Enter into service mode.
- 2. Select and adjust each item in order to obtain the optimum image.

Item No	Adjustment item.	Data Amount
03	H SHIFT	ADJ.
04	H SIZE	ADJ.
05	PIN AMP	ADJ.
06	CORR PIN	ADJ.
07	TILT	ADJ.
08	V LINEAR	ADJ.
09	V SIZE	ADJ.
OA	S CORR	ADJ.
OB	V CENTER	ADJ.

Note: V ANGLE is adjusted by a Variable Resistor on the 'D' Board (RV301)



- D Board Component Side -



### 4-3. BE-3B SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-3B chassis is triggered in 1 of 2 ways: -1: Bus busy or 2: Device failiure to respond to IIC. In the event of one of these situations arrising the software will first try to release the bus if busy (Failiure to do so will report with continous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1., on fatal errors are reported with this method.

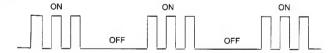
If a fatal error is found the set will simply stay in whichever state it was when the error occured, but if a non fatal error occurs the set will try to continue operation.

Table 1

Device	LED Error Count	Fatal Error	
NVM	29	<b>V</b>	
Teletext	10		
Jungle	11	<b>V</b>	
Video_sw	12		
Tuner	13	1	
Nicam	14		
Audio_cont	15	√	

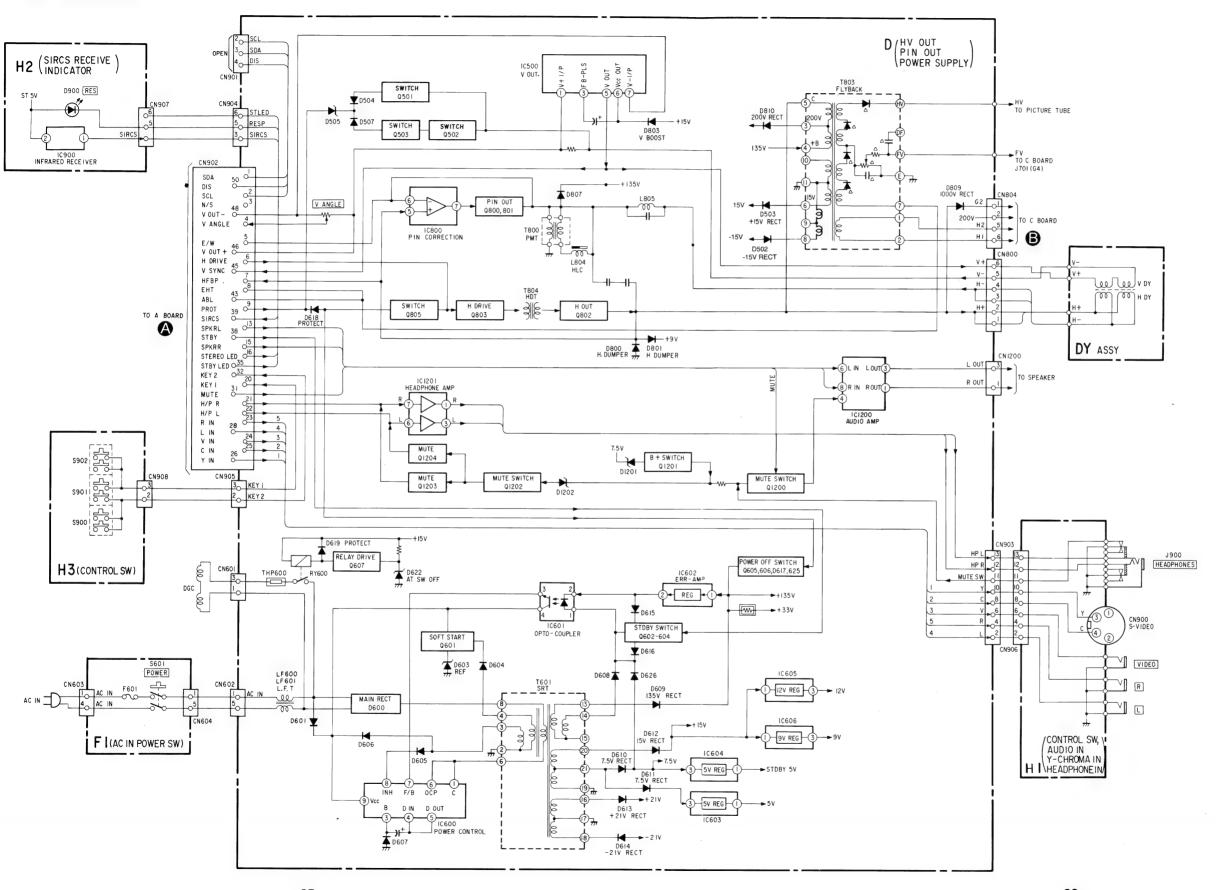
Flash Timing Example : e.g. error number 3.

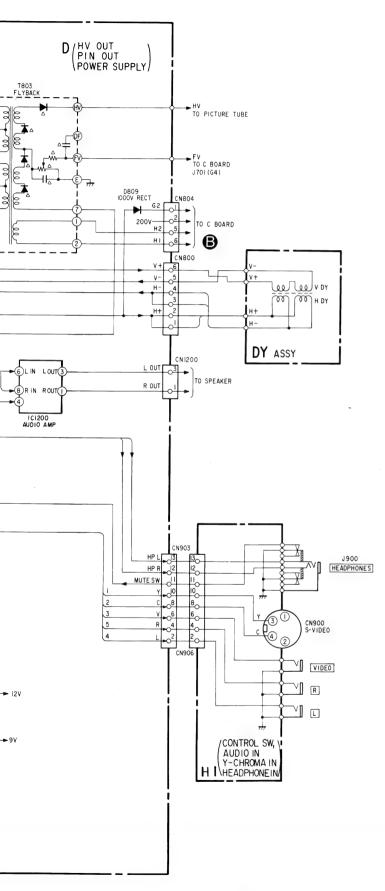


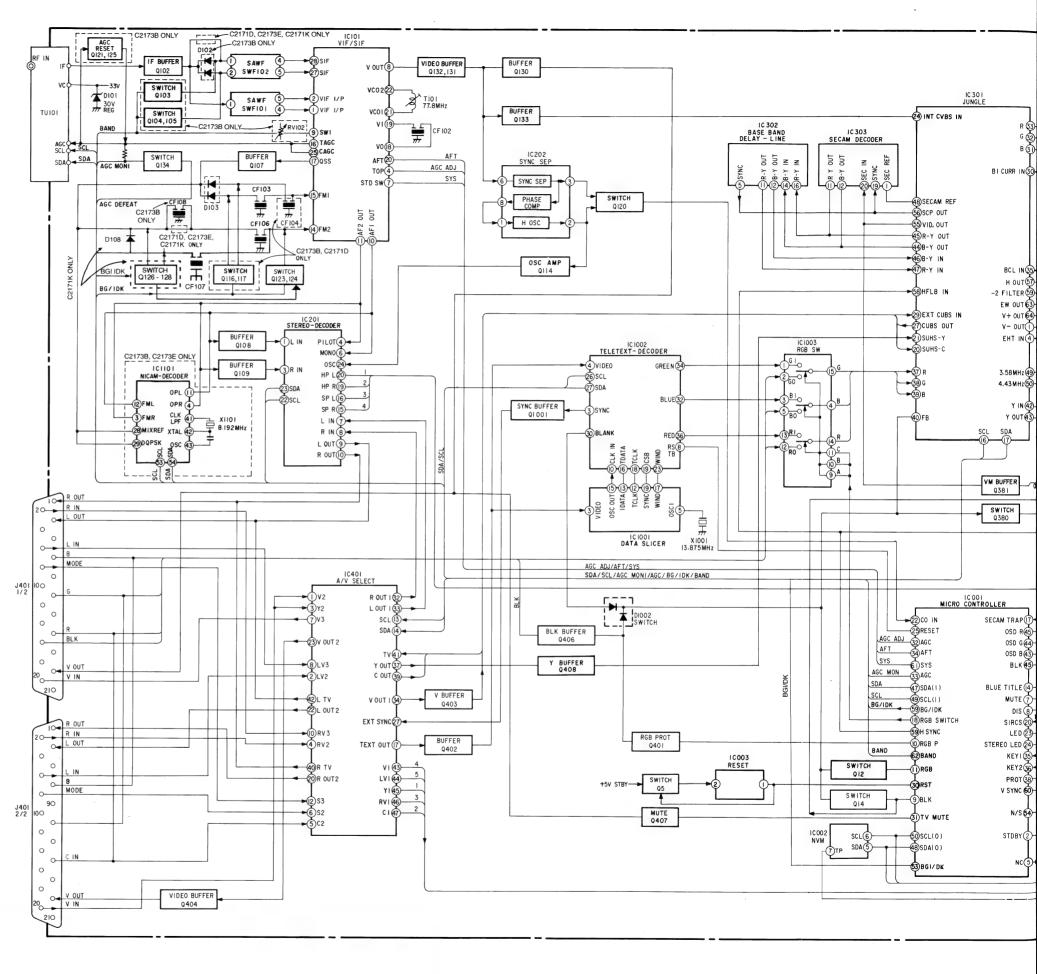


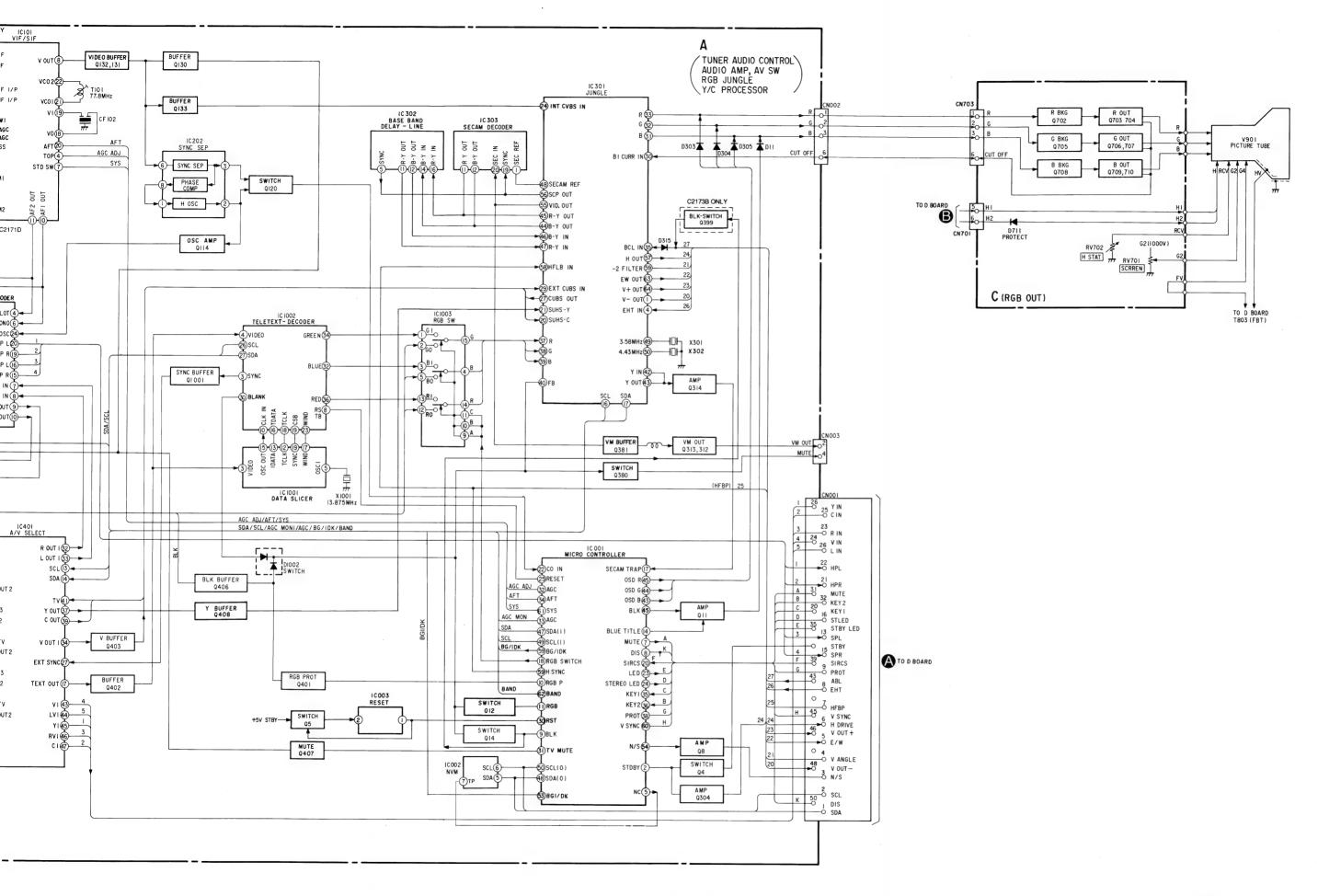
# SECTION 5 DIAGRAMS

### 5-1. BLOCK DIAGRAM

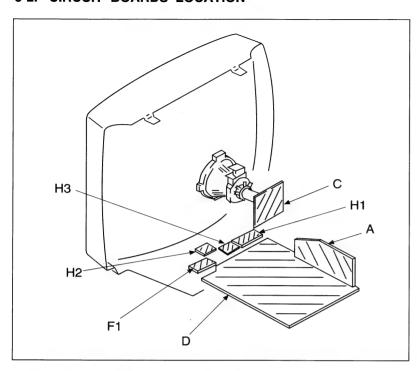








### 5-2. CIRCUIT BOARDS LOCATION



### 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

#### Note:

 All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytic and tantalums.

All resistors are in ohms.

k = 1000 , M = 1000K

• Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power ¼ W

: nonflammable resistor.
: internal component.

• : panel designation, or adjustment for repair.

All variable and adjustable resistors have characteristic curve

B, unless otherwise noted.

•  $\perp$  : earth - ground. •  $\not$  : earth - chassis.

: no mounted.

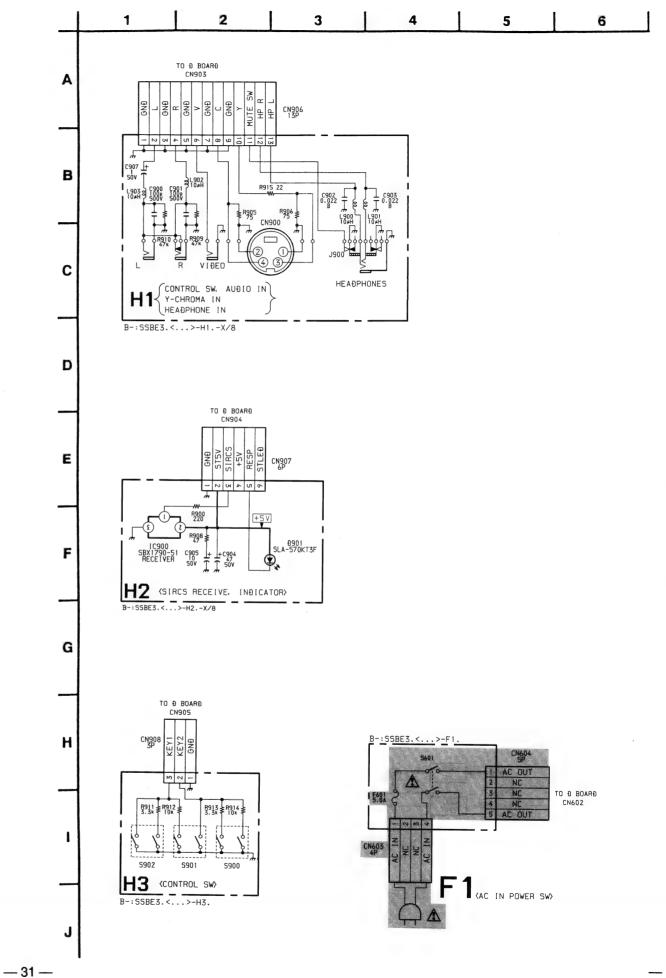
Note: Les composants identifies par une trame et une marque \( \subseteq \) sont critiques pour la securite.

Ne les remplacer que par une piece portant le numero specifie.

### Reference information

Reference inform	mation	
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	×	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ---- : B+ bus.
- : signal path. (RF)



CON

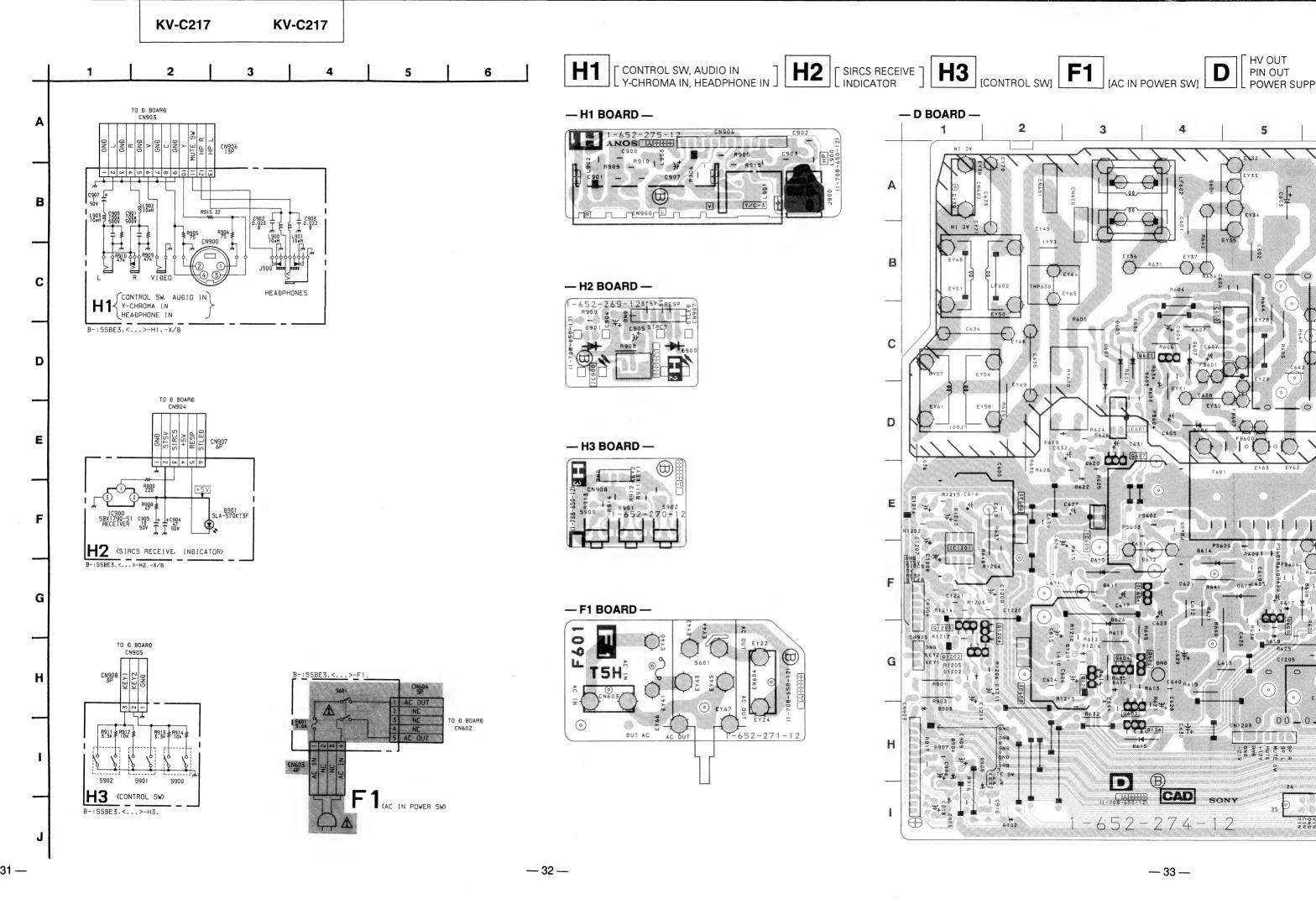
- H1 BOARD

- H2 BOARD

- H3 BOARD

- F1 BOARD

F601



HV OUT

5

SP R SP R MUTE HUTE 9NB

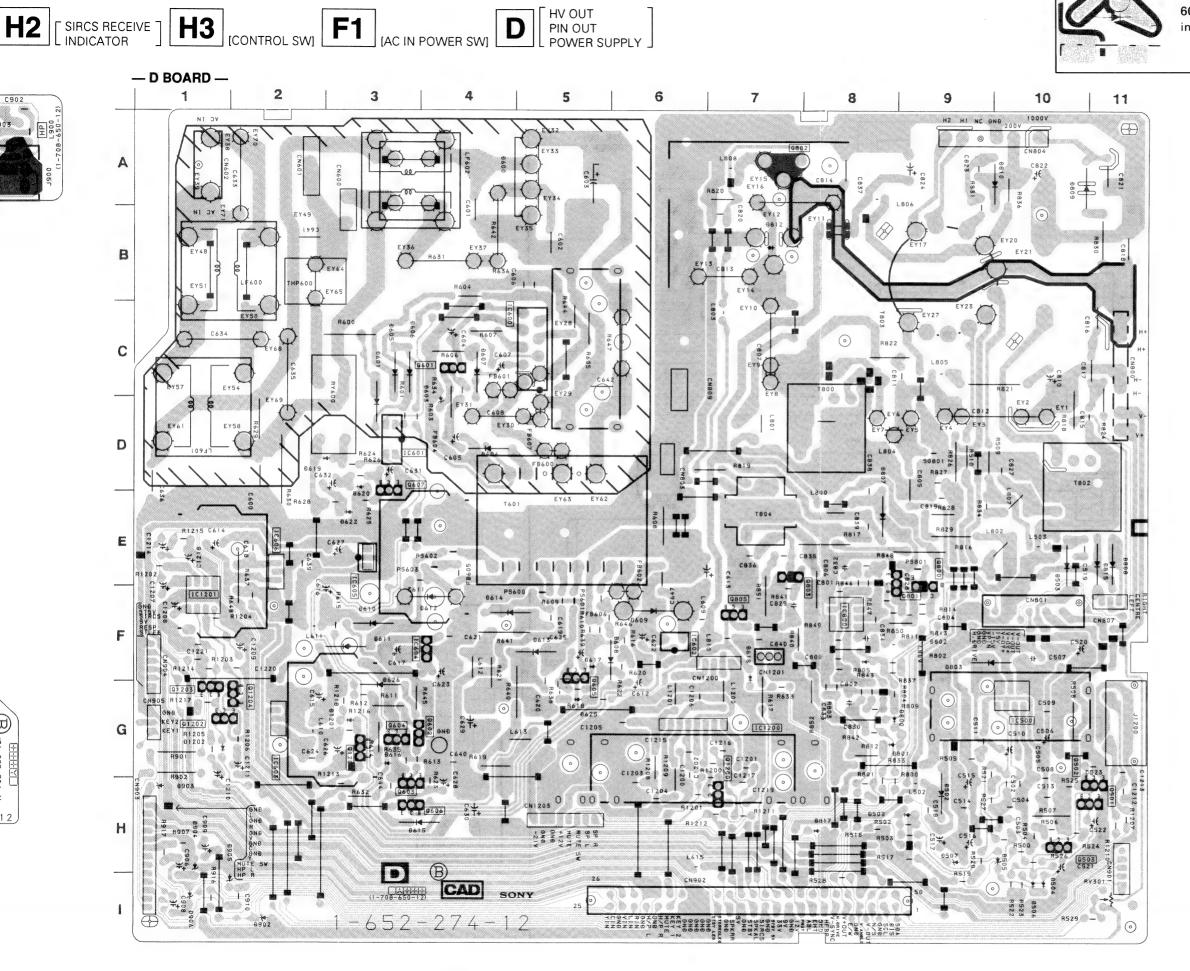
L POWER SUPPLY



### NOTE:

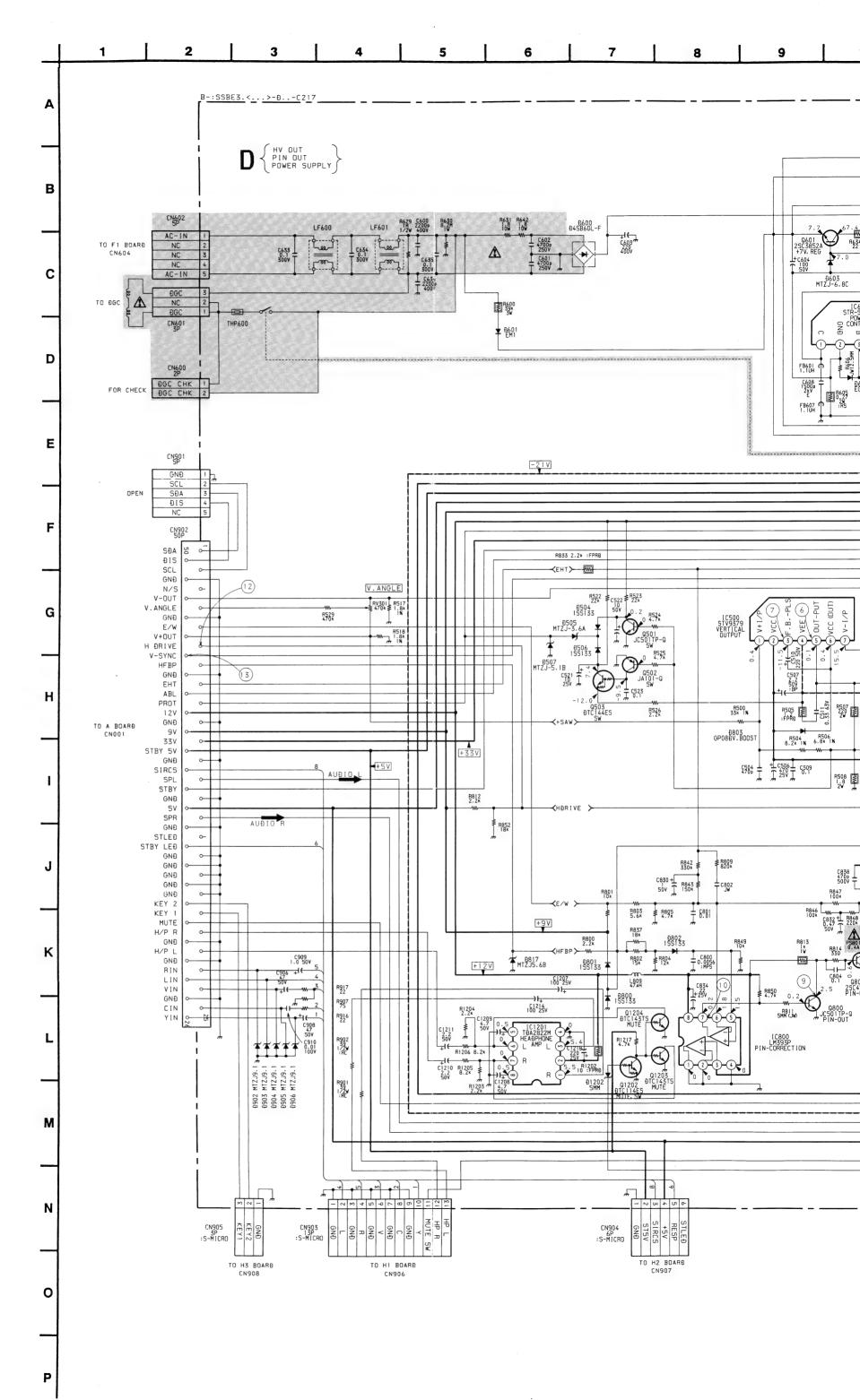
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

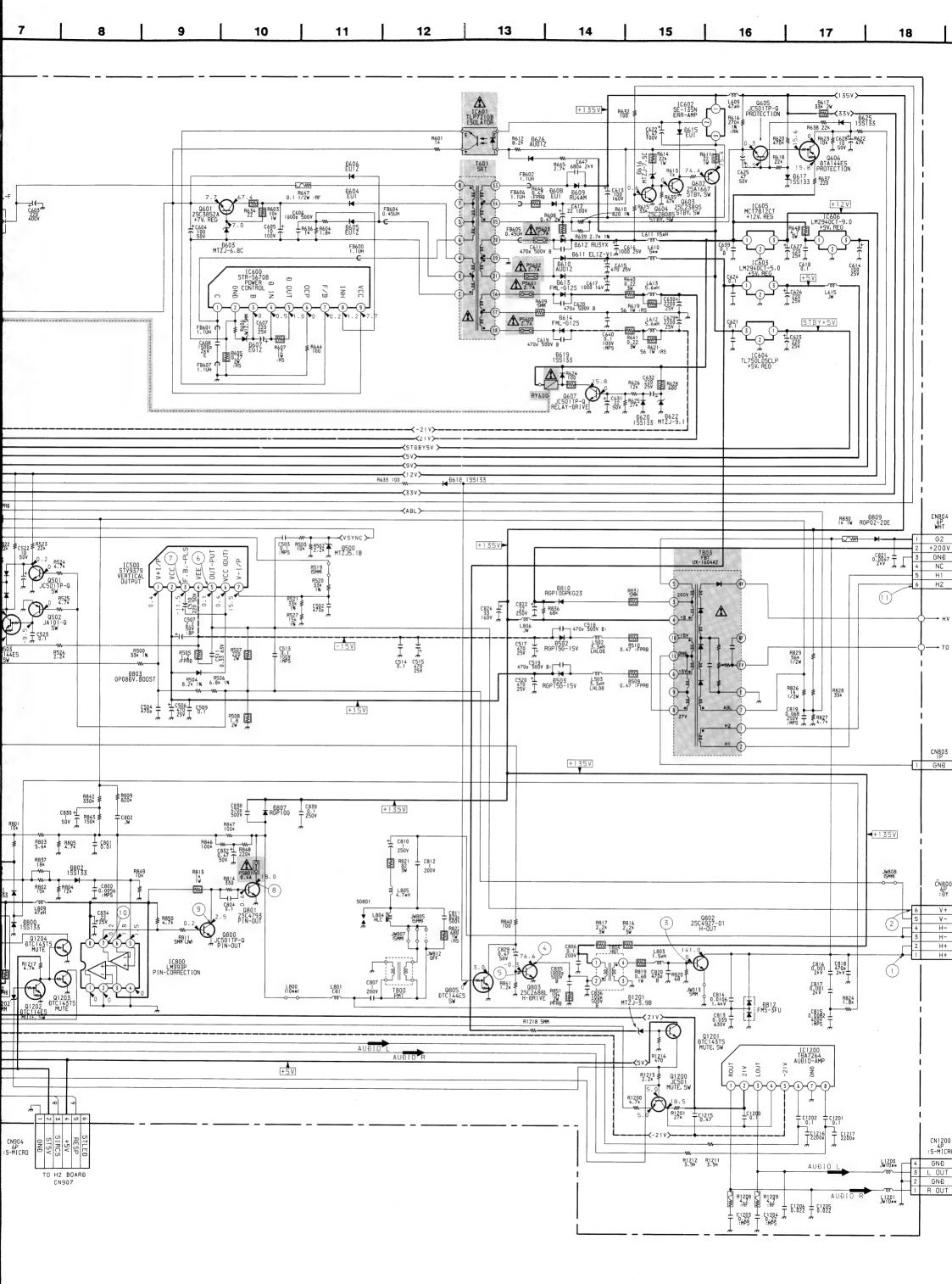


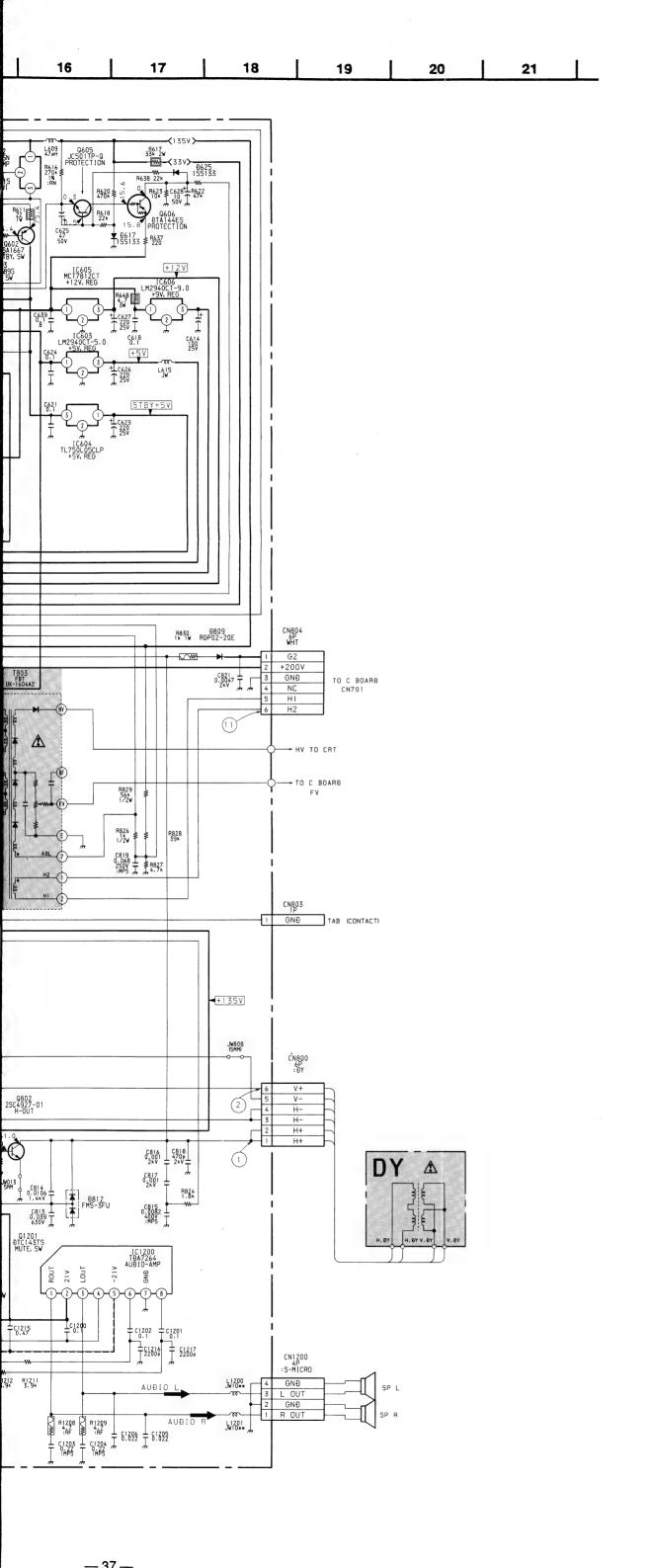


### **D BOARD**

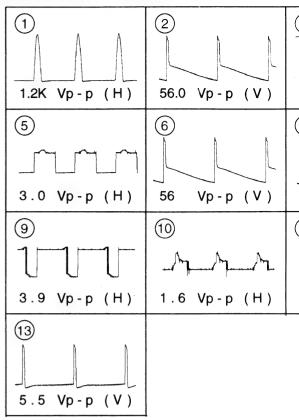
D BOAF			
IC	IC		A-4
IC500 IC600 IC601 IC602 IC603 IC604 IC605 IC606 IC800 IC1200 IC1201	G-10 C-5 D-3 F-6 G-2 F-4 E-3 E-2 F-8 G-7	D600 D601 D603 D604 D605 D606 D607 D608 D609 D610 D611 D611 D613	C-3 D-4 C-3 C-3 C-4 F-6 F-6 F-3 F-3 F-4
TRANS	ISTOR	D614 D615	F-4 H-3
Q501 Q502 Q503 Q601 Q602 Q603 Q604 Q605 Q606 Q607 Q800 Q801 Q802 Q803 Q805 Q1200 Q1201 Q1202 Q1203 Q1204	H-11 G-11 H-11 C-4 G-4 H-3 G-5 H-4 D-3 E-9 F-9 A-7 F-8 F-7 H-7 G-3 G-1 G-2	D616 D617 D618 D619 D620 D622 D625 D626 D800 D801 D802 D803 D807 D809 D810 D812 D817 D902 D904 D905	G-3 F-5 F-7 D-2 E-3 G-5 G-9 G-9 F-9 D-8 A-10 B-7 H-8 I-2 H-1 H-1
DIC	DE	D906 D1201	I-1 G-3
D500 H-8 D502 H-9 D503 E-10		VARI	ABLE STOR
D504 D505 D506 D507	I-10 H-10 I-10 H-9	RV301	I-11



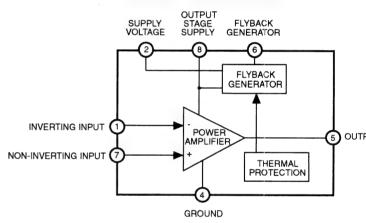




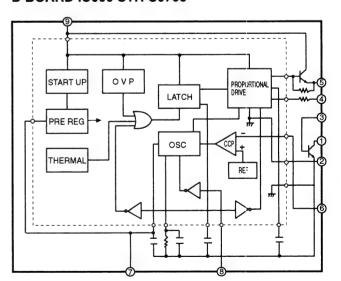
### **WAVEFORMS D BOARD**



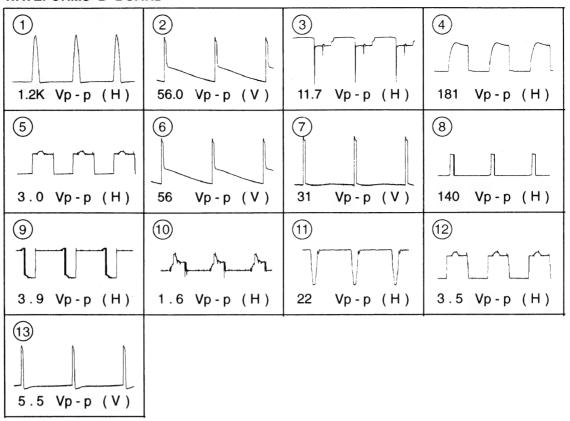
### D BOARD IC500 STV9379



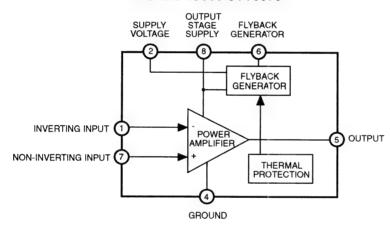
# D BOARD IC600 STR-S6708



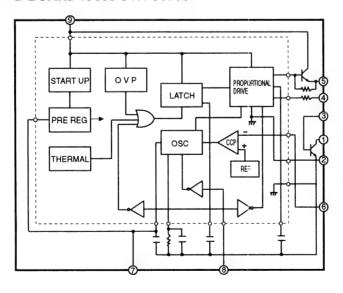
### WAVEFORMS D BOARD



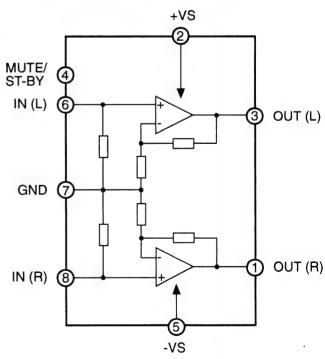
### D BOARD IC500 STV9379

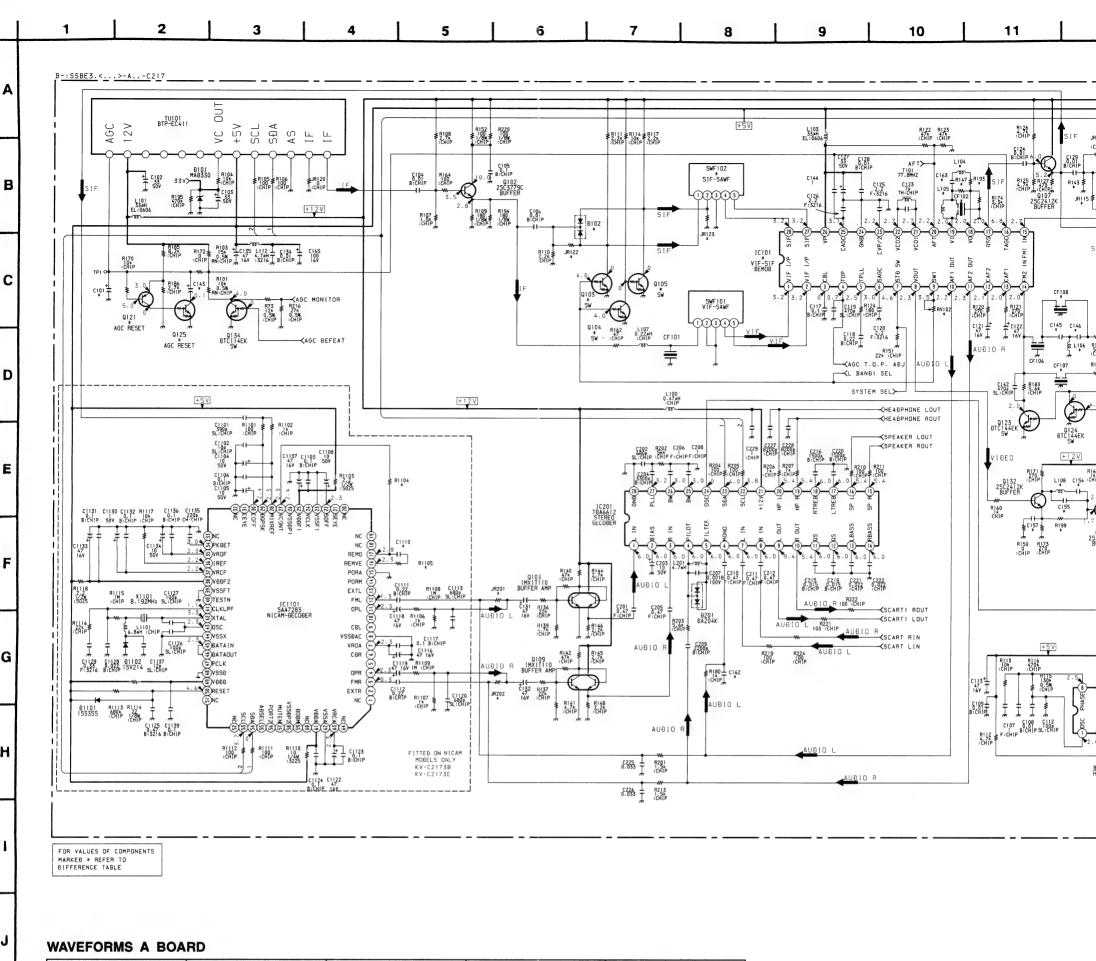


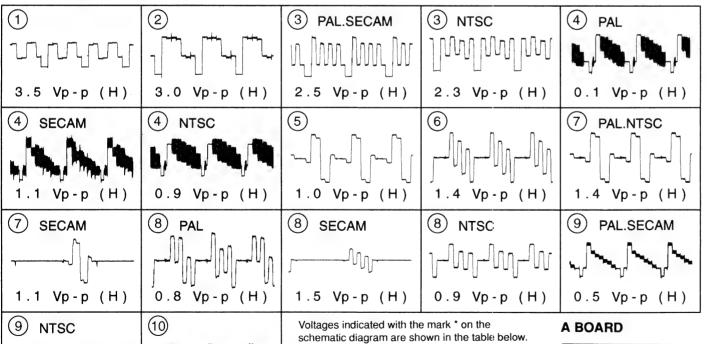
### **D BOARD IC600 STR-S6708**



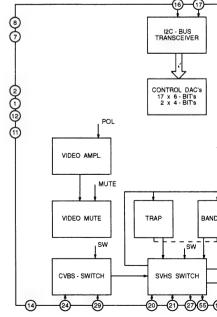
# D BOARD IC1200 TDA7264







IC	Pin	PAL	SECAM	NTSC 3.58	NTSC 4.43
IC301	17	4.0	4.0	4.0	0
	35	3.6	2.5	3.5	3.5
	44	1.5	3.1	1.5	1.5
	45	1.5	3.0	1.5	1.5
	48	1.7	4.4	1.6	1.7
	49	1.4	1.4	2.0	1.4
	50	2.0	2.0	1.4	2.0
	63	3.4	2.5	2.2	2.5
IC303	1	1.7	4.4	1.6	1.7
	11	1.5	3.0	1.5	1.5
	12	1.5	3.1	1.5	1.5



A BOARD IC301 TDA8366

M

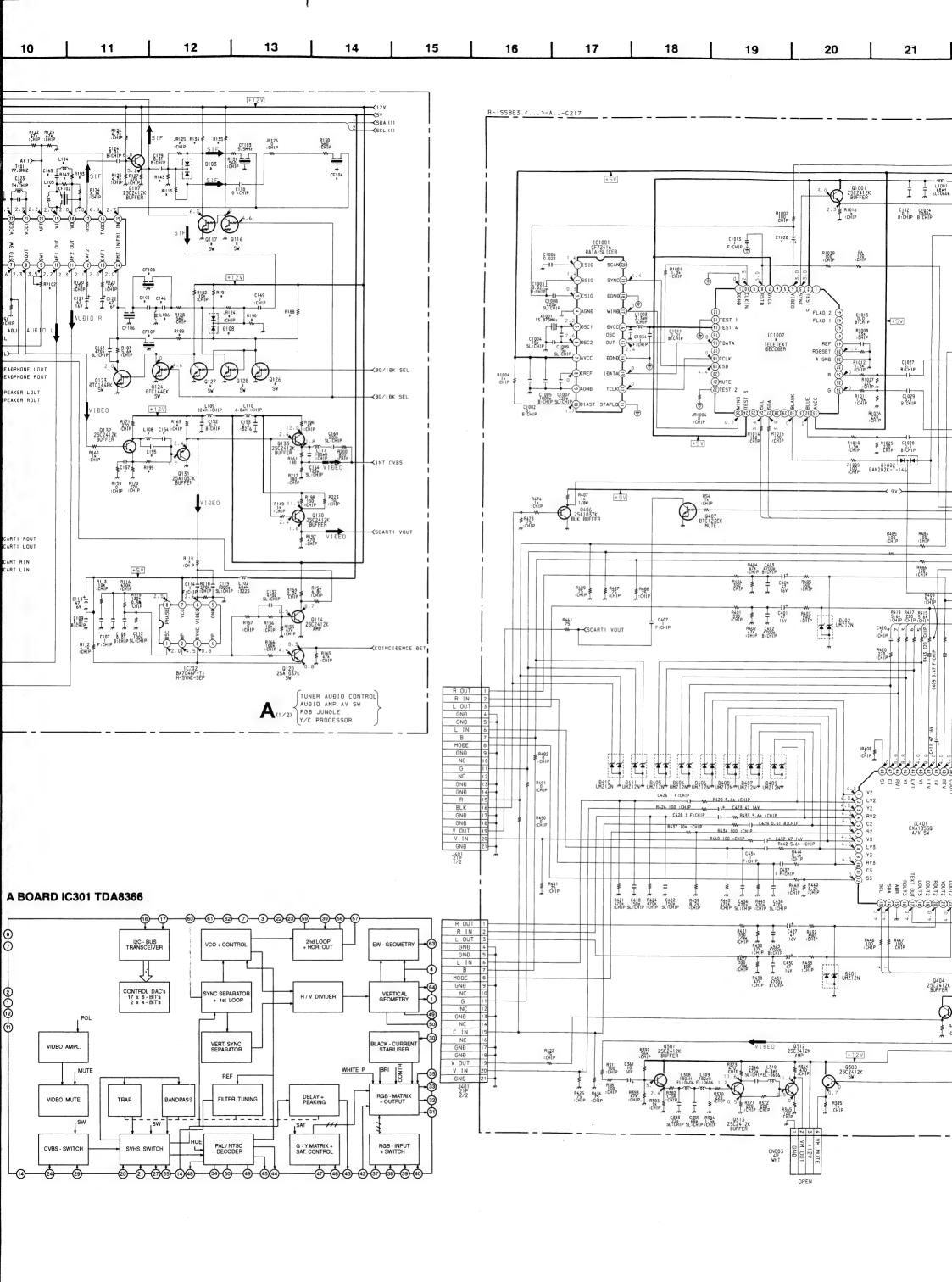
N

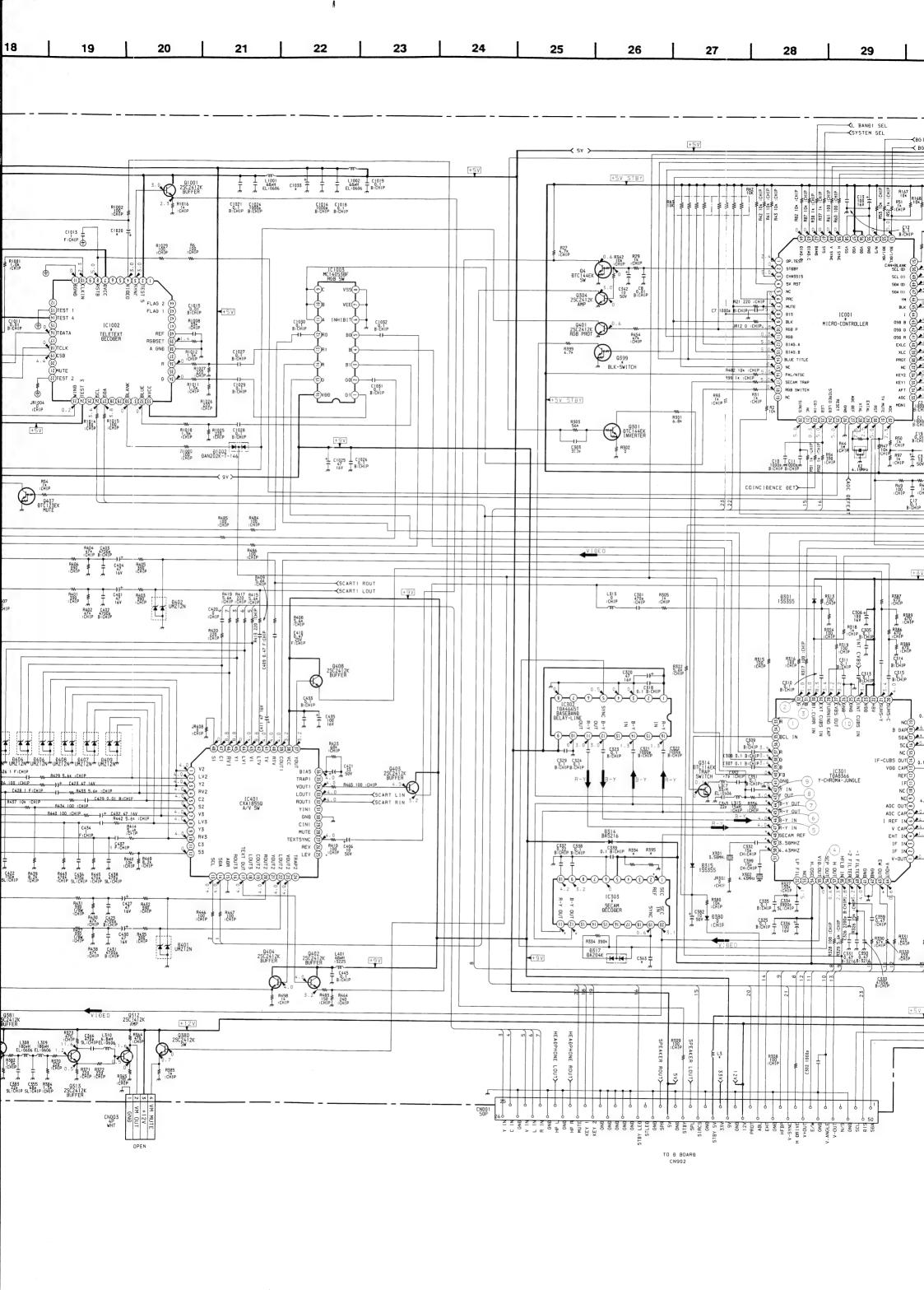
0

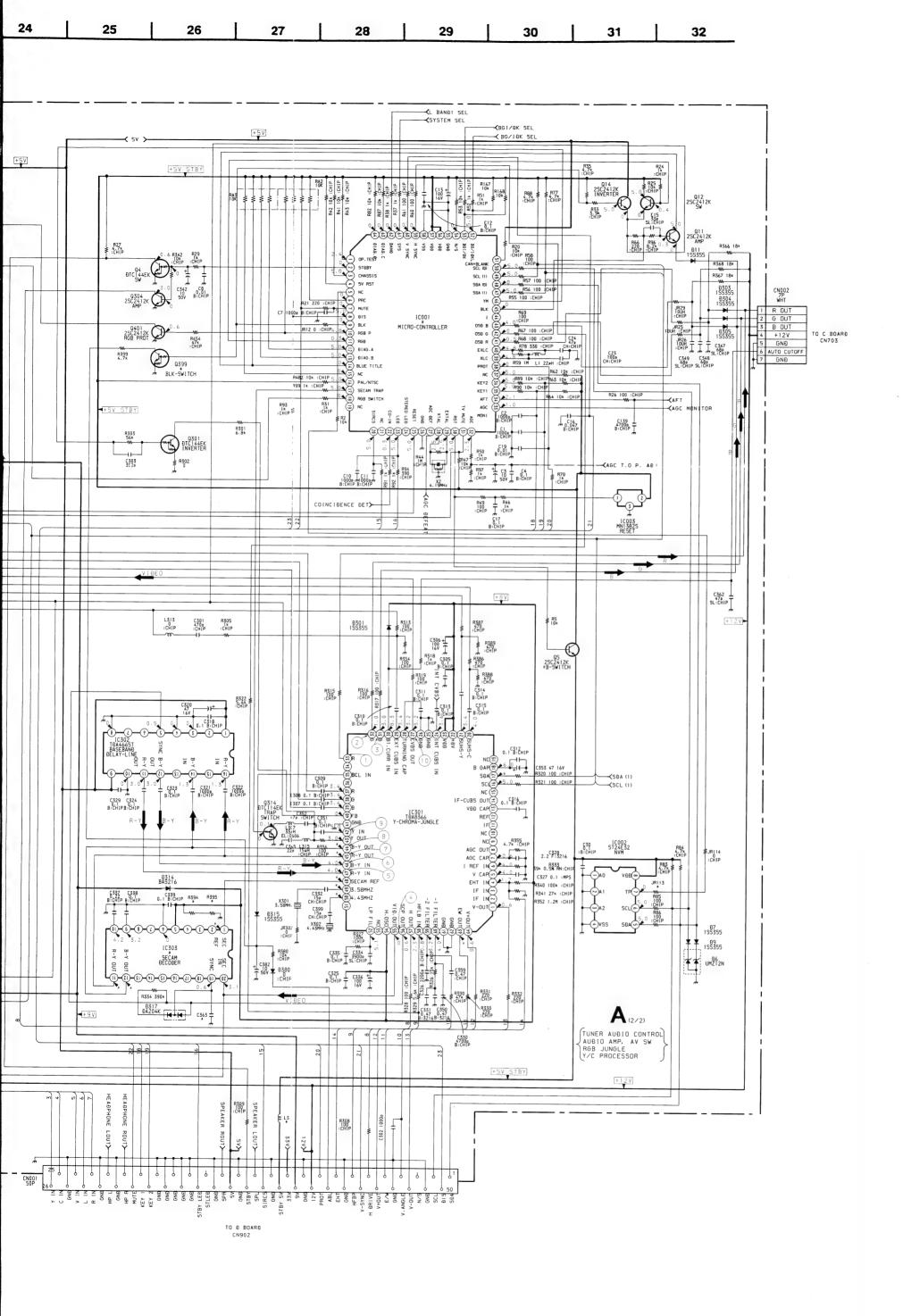
0.4 Vp-p (H)

A BOARD

1.0 Vp-p (H)





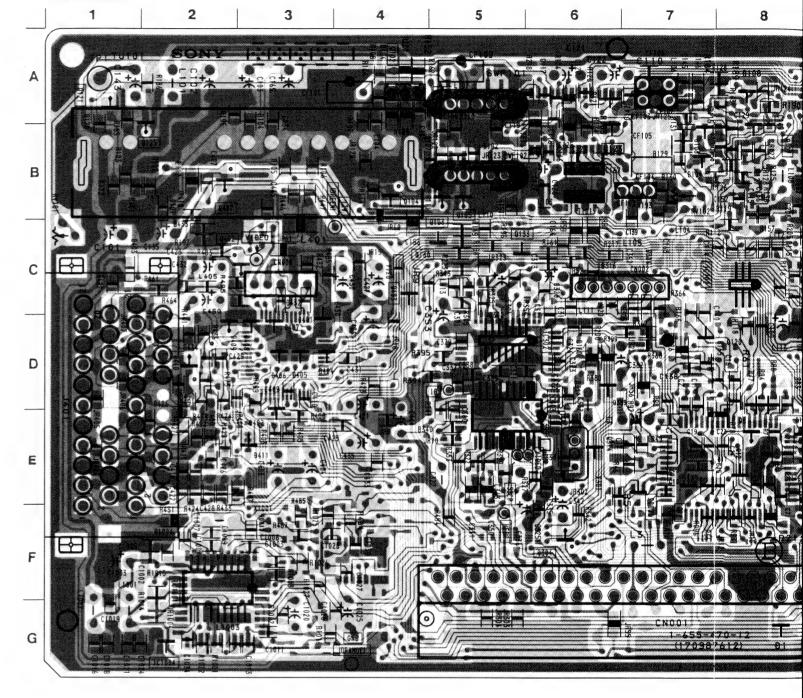


### A BOARD \* MARK

Ref. No.	C2173B	C2171D	C2173E	C2171K	C2171KR	
C101	4.7MF 50V	22MF 50V	22MF 50V	22MF 50V	22MF 50V	
C143	100MF 16V	-	-	-	-	
C145	_	0 : CHIP	0 : CHIP	-	-	
C146	-	0 : CHIP	0 : CHIP	-	-	
C154	33P	68P	68P	68P	68P	
C155	-	18P	18P	18P	18P	
C157	68P	33P	33P	33P	33P	
C162	0.012MF	_	_	_	_	
C163	0.001MF	_	_	_	-	
C363	22P	22P	22P	-	_	
C1020	-	22MF 50V	22MF 50V	22MF 50V	22MF 50V	
C1033	_	10MF 50V	10MF 50V	10MF 50V	10MF 50V	
CF102	5.5MHz/6.6MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	
CF104	6.0MHz	6.5MHz	_	6.5MHz	6.5MHz	
CF107	_	_	_			
CF108	6.0MHz		_			
D102	DAN202K		_	_		
D103	DAN202K	DAN202K	_	DAN202K	DAN202K	
D108	DAI42021	DAINZUZK		DAN202K	DAN202K DAN202K	
IC001	CXP85340A-117Q	- CXP85340A-117Q				
IC101	TDA9814T/V2		CXP85340A-116Q	CXP85340A-117Q	CXP85340A-1170	
		TDA9813T	TDA9813T	TDA9813T	TDA9813T	
JR51	CF70200FN	CF70203FN	CF70200FN	CF70203FN	CF70209FN	
	-	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	
JR113	-	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	
JR115	_	_	-	0 : CHIP	0 : CHIP	
JR122	-	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	
JR123	-	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	
JR124	0 : CHIP	0 : CHIP	0 : CHIP	_	_	
JR125	-	_	0 : CHIP	_	-	
JR201	-	0 : CHIP	-	0 : CHIP	0 : CHIP	
JR202	-	0 : CHIP	_	0 : CHIP	0 : CHIP	
L3	68uH	-	-	_	_	
L104	100uH	-	_	-	-	
L105	5.6uH	12uH	12uH	12uH	12uH	
L106	0 : CHIP	-	_	-	-	
L108	27uH	39uH	39uH	39uH	39uH	
Q103	DTC114EK	-	-	-		
Q104	DTC114EK	_	_		_	
Q105	DTC114EK		-	-	-	
Q116	DTC144EK	DTC144EK	-	-	-	
Q117	DTC144EK	DTC144EK	-	_	_	
Q121	2SA1037K	_	_	_	_	
Q125	DTC114EK	_		-	-	
Q126	-	_	_	DTC144EK	DTC144EK	
Q127	-	_	_	DTC144EK	DTC144EK	
Q128	-	_	_	DTC144EK	DTC144EK	
Q305	_	_	JC501	- -	-	
2399	DTC144EK	_	-	_	_	
R134	2.2K	2.2K	_	2.2K	2.2K	
R135	2.2K	2.2K	_	2.2K	2.2K	
R143	2.2K	2.2K	_	- Z.ZK	Z.ZR	
3147	180	220				
	180		220	220	220	
R188		_	-	2.2K	2.2K	
R189	-	_	-	1K	1K	
R190	-	-	-	2.2K	2.2K	
R191	-			2.2K	2.2K	
R193	1K	_	-	-	_	
R199	1.2K	1K	1K	1K	1K	
304	-	_	10K	_	_	
394	2.2K	_	2.2K	_	_	
395	1K	-	1K	-	_	
RV102	22K	_	-	-	_	
SWF102	K9453M	K9350M	K9350M	K9350M	K9350M	

TUNER AUDIO CONTROL AUDIO AMP, AV SW RGB JUNGLE, Y/C PROCESSOR

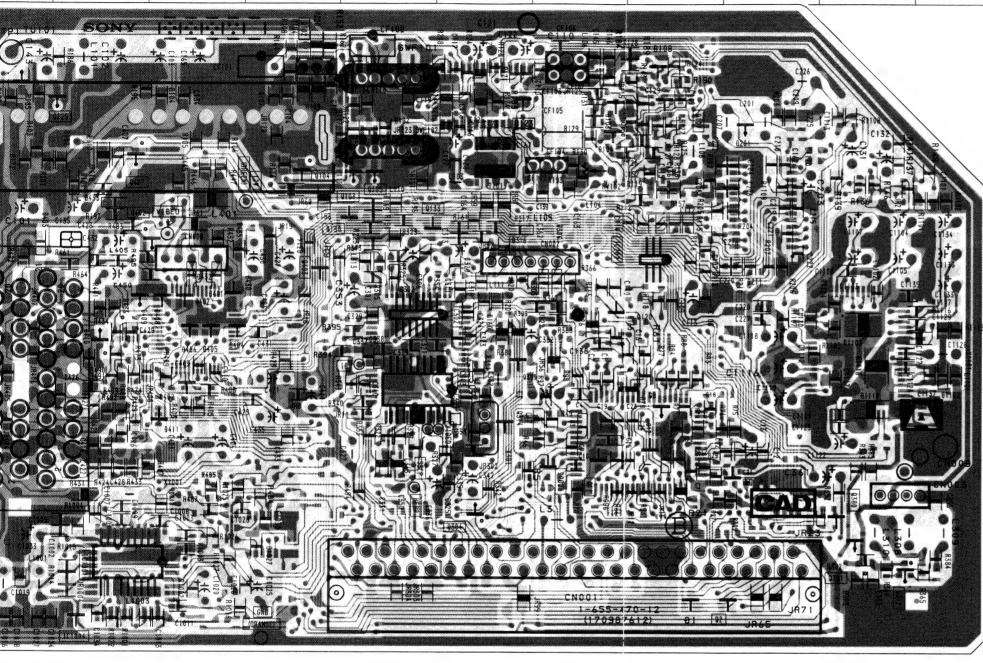
- A BOARD -

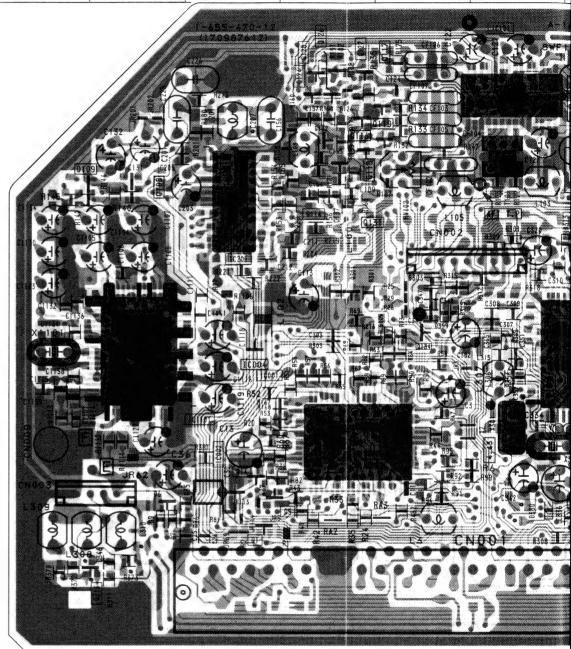


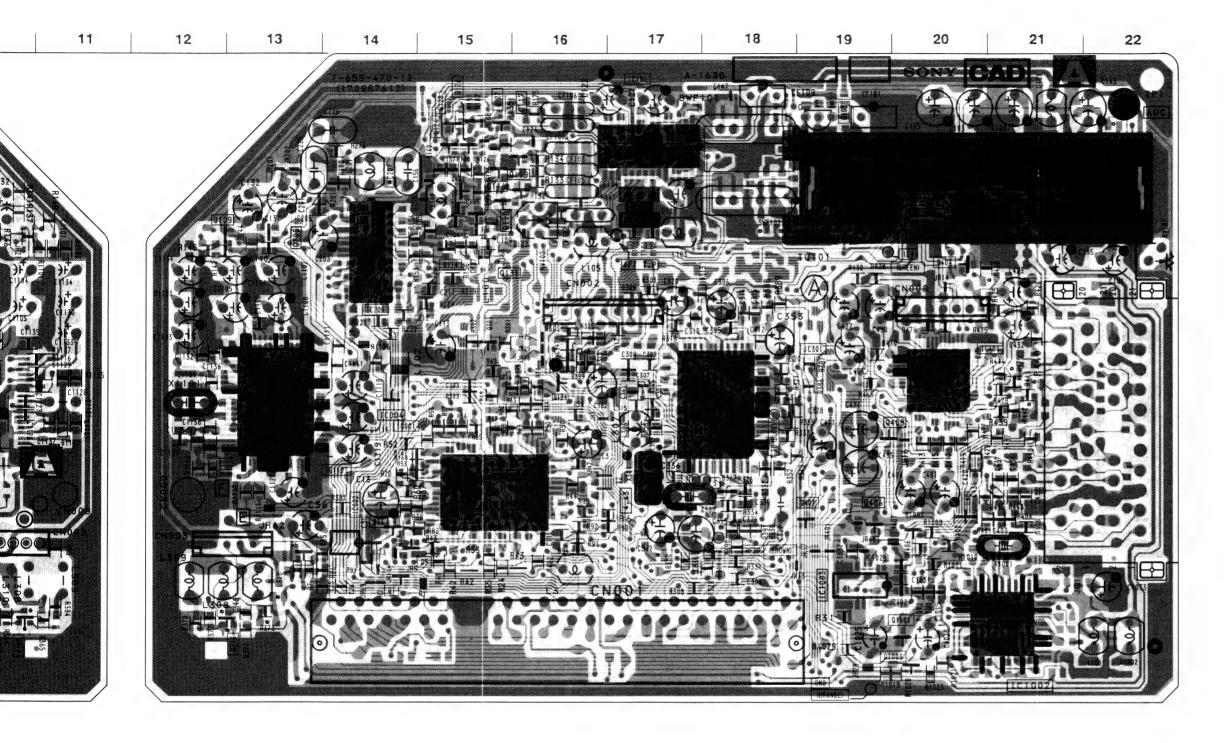
TUNER AUDIO CONTROL
AUDIO AMP, AV SW
RGB JUNGLE, Y/C PROCESSOR

DARD —

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17







### A BOARD

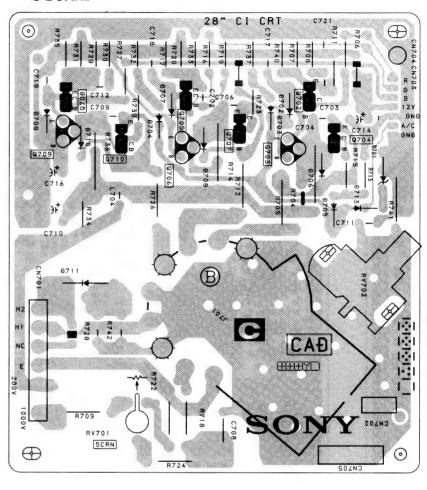
IC		Q380	F-10
IC001 IC002 IC003 IC101 IC201 IC202 IC301 IC302 IC303 IC401 IC1001	E-15 E-14 E-7 A-17 C-14 C-8 D-19 E-6 E-6 D-21 F-2	Q381 Q399 Q401 Q402 Q403 Q404 Q406 Q407 Q408 Q1001	G-10 D-7 E-19 C-2 C-4 C-20 E-20 B-2 D-20 G-20
IC1002 IC1003	G-21 F-19	DIO	
• IC1101	E-14	D6 D7	F-14 F-14
TRANSIS	STOR	D9 D11	F-13 E-8
Q4 Q5 Q11 Q12 Q14 Q102 Q104 Q105 Q107 Q108 Q107 Q108 Q114 Q116 Q117 Q120 Q121 Q123 Q124 Q125 Q125 Q126 Q127 Q128 Q130 Q131 Q132 Q133	F-9 F-15 F-7 E-8 E-14 A C-5 B-13 B-13 C-15 B-16 A-15 B-15 A-15 B-15 A-15 B-15 C-15 B-16 B-15 B-15 B-15 B-15 B-16 B-15 B-16 B-16 B-16 B-16 B-16 B-16 B-17 B-18 B-18 B-19 B-19 B-19 B-19 B-19 B-19 B-19 B-19	D101 ○ D102 □ D103 ■ D108 ■ D201 □ D301 □ D303 □ D304 □ D305 □ D314 □ D315 □ D317 □ D380 □ D401 □ D402 □ D404 □ D405 □ D406 □ D407 □ D408 □ D409 □ D410 □ D411 □ D1002 ■ D1101	B-2 B-5 B-7 A-8 B-9 C-17 C-16 C-7 C-7 C-4 D-17 E-18 F-17 D-3 D-3 D-3 D-3 D-3 D-3 D-3 D-3 D-3 D-3
Q134 Q301 Q304	D-16 C-16 F-6	VARIA RESIS	
Q312 Q313 Q314	G-11 G-13 E-6	O RV102	B-16

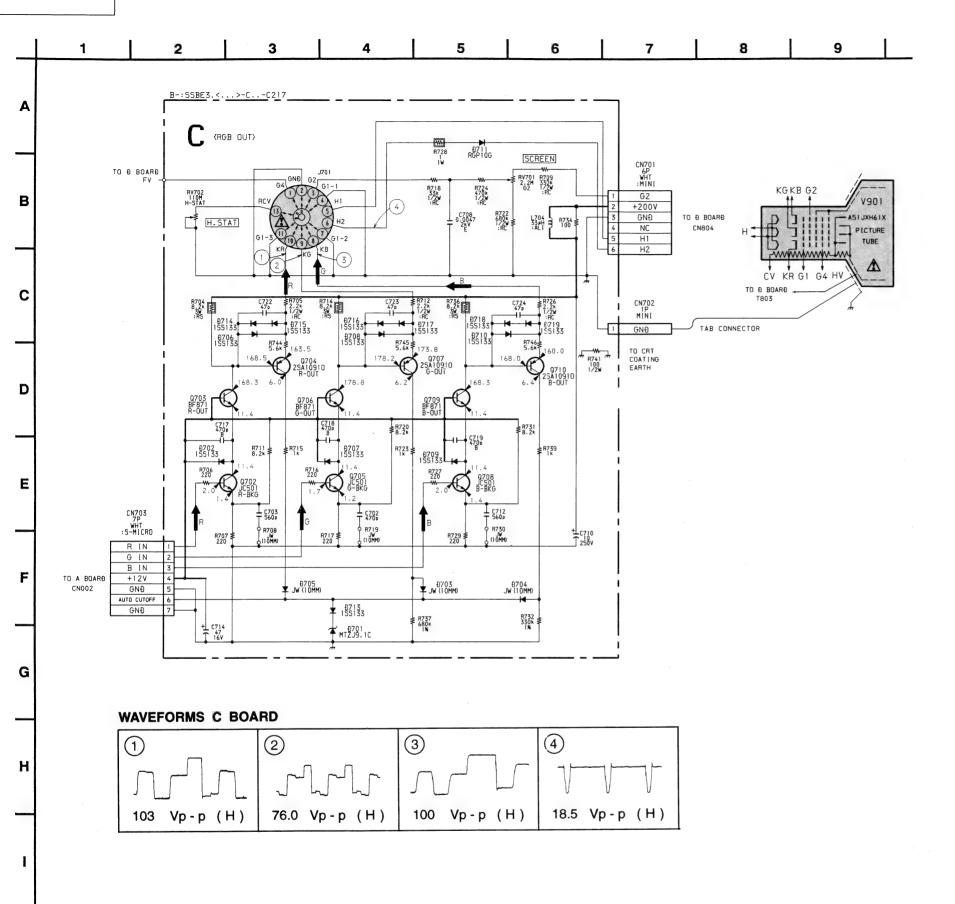
○ mark : KV-C2173B only
 ● mark : KV-C2173B and C2173E only
 □ mark : KV-C2173B, C2171D, C2171K and C2171KR only
 ■ mark : KV-C2171K and C2171KR only

Pattern from the side which enables seeing.Pattern of the rear side.



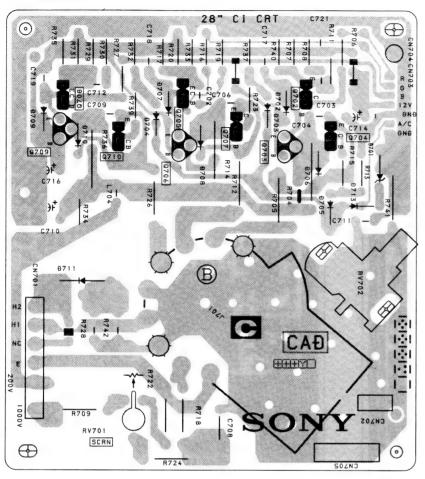
### - C BOARD -



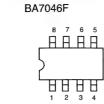




### - C BOARD -



### 5-4. SEMICONDUCTORS





CF70200FN-R/C CF70203FN-F CF70209FN-R

0

(TOP VIEW)

(TOP VIEW)

(TOP VIEW)

SAA7283GP TDA8366H/N3

HD14053BF MC14053BF

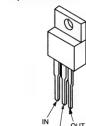
88888888 (TOP VIEW)

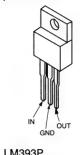
CXP85340A-117Q-TL

CXA1855Q-T6

CF72416DW-R

TDA8395T

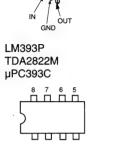


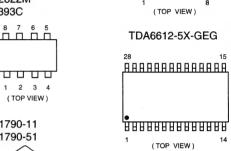


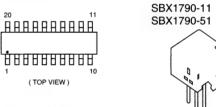
LM2940CT-5.0 LM2940CT-9.0

MCT7812CT TA7812S

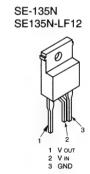
μPC2405HF

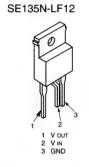


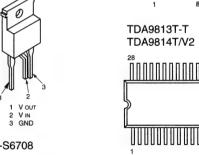


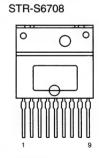


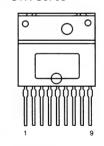


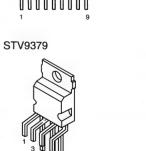


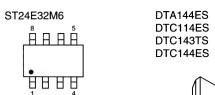












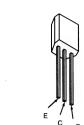
(TOP VIEW)

TDA4665T-T

TDA7264

TL750L05CLPR

BF871-127



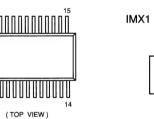
DTC114EK DTC123EK DTC144EK 2SA1037K 2SA1162-G 2SC2412K



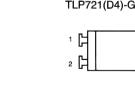
JA101 JC501 2SA1091-O 2SA733-K 2SC2389STP-R 2SC2808STP-R



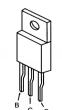




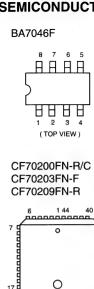




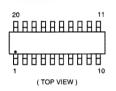




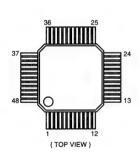
### 5-4. SEMICONDUCTORS



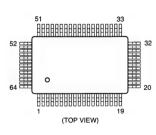




CXA1855Q-T6



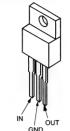
CXP85340A-117Q-TL SAA7283GP TDA8366H/N3



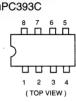
HD14053BF MC14053BF



LM2940CT-5.0 LM2940CT-9.0 MCT7812CT TA7812S μPC2405HF



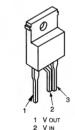
LM393P TDA2822M µPC393C



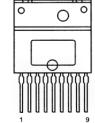
SBX1790-11 SBX1790-51

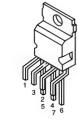


SE-135N SE135N-LF12



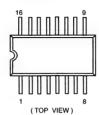
STR-S6708



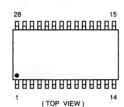


ST24E32M6 ÅAAÅ

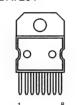




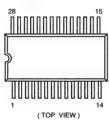
TDA6612-5X-GEG

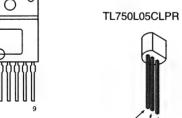


TDA7264

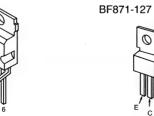


TDA9813T-T TDA9814T/V2

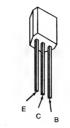




STV9379



DTA144ES DTC114ES DTC143TS DTC144ES



DTC114EK DTC123EK DTC144EK 2SA1037K 2SA1162-G 2SC2412K



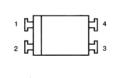
JA101 JC501 2SA1091-O 2SA733-K 2SC2389STP-R 2SC2808STP-R



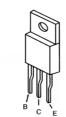
IMX1



TLP721(D4)-GR



2SA1667 2SC3852A



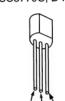
2SC2688-LK



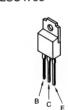
2SC2785-HFE



2SC3779C, D-AA



2SC4793



2SC4927-01

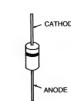


AU-01Z-V1 FML-G12S EGP20G









BAS216 DTZ33B MA8330 1SS355



DAN202K UMZ12N-T106





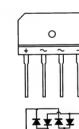


FMS-3FU-LF027-103

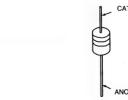
DA204K



D4SB60L



ERA85-009	MTZJ-9.1C
MTZJ-3.6A	MTZJ-39C
MTZJ-3.9B	RD3.9ESB2
MTZJ-4.7B	RD5.1ESB2
MTZJ-5.1B	RD5.6ESB2
MTZJ-5.6B	RD6.8ESB2
MTZJ-6.8C	RD7.5ESB2
MTZJ-7.5C	RD9.1ESB3
MTZJ-T-77-9.1	UZ-4.7BSC
MTZJ-T-77-9.1A	1SS133T-77





# SECTION 6 EXPLODED VIEWS

### NOTE:

- Items with no part number and no description are not stocked because they
  are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked \( \frac{1}{2} \) are critical for safety.

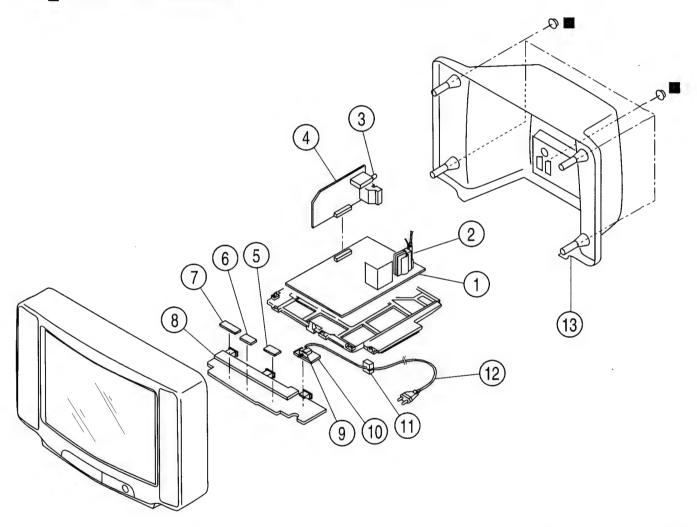
Replace only with the part number specified.

Les composants identifies par une trame et une marque  $\hat{N}_{\lambda}$  sont critiques pour la securite.

Ne les remplacer que par une piece portant le numero specifie.

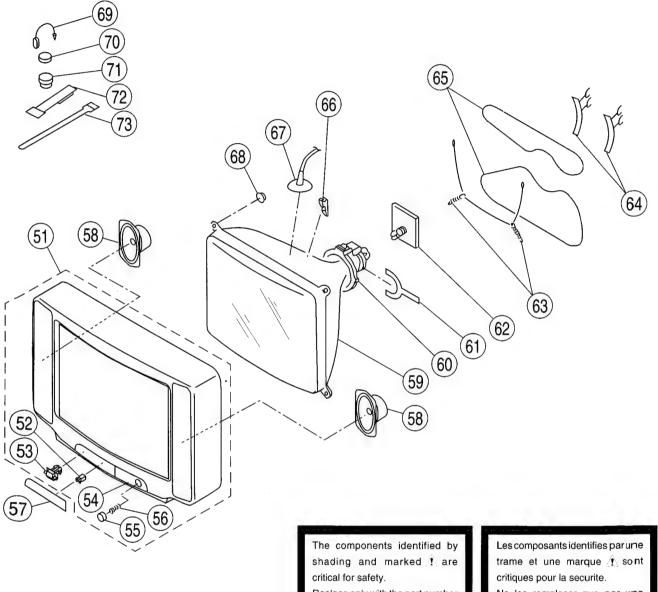
### 6-1. CHASSIS

: +BVTP 4X16 7-685-663-79



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
\$ 4 *A	-1642-122-A -1653-169-11 -598-045-00 -1632-299-A -1632-290-A -1632-370-A -1632-370-A -1646-070-A -1646-093-A -1646-092-A -1203-180-01 -1511-433-21 -1624-050-A	D BOARD, COMPLETE TRANSFORMER ASSY, FLYBACK TUNER (BTP-EC411) A BOARD, COMPLETE (KV-C21 A BOARD, COMPLETE (KV-C21 A BOARD, COMPLETE (KV-C21 A BOARD, COMPLETE (KV-C21 H2 BOARD, COMPLETE H3 BOARD, COMPLETE H1 BOARD, COMPLETE BRACKET, H SMITCH PUSH AC POMER)	73B) 71D) 73E) 71K) 71K)	11 Total Control of Co	4-389-201-11 1-690-270-11 1-765-286-11 4-203-172-01		:21738/C217LK/C2171KR TB FILTER)

### 6-2. PICTURE TUBE



Replace only with the part number specified.

Ne les remplacer que par une piece portant le numero specifie.

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMIARK
51	X-4200-233-1	BEZNET ASSY	52 - 56	63	4-369-318-21	SPRING, TENSION	
52	4-392-036-01	CATCHER, PUSH		64	*4-386-622-11	BAND, DGC	
53	4-203-179-01	DOOR, CONTROL (PAINTED)		65	1 1-406-828-11	COIL, DEGAUSSING	THE PERSON NAMED IN
54	3-703-035-11	SHAFT, LID		66	3-704-495-01	SPACER, DY	
55	4-203-176-01	BUTTON, POWER				CAP ASSY, HIGH-VOLTAG	B
56	4-202-964-01	SPRING		68	4-203-177-01	SCREW SELF TAPPING	
57 58	4-203-175-01	WINDOW, ORNAMENTAL		69	4-308-870-00	CLIP, LEAD WIRE	
	1-544-525-11	SPEAKER	PARKET & P	70	1-452-032-00	MAGNET, DISK; 10MM Ø	
	1 8-738-783-05	PICTURE TUBE (SD-169) (A51	(JXH61X)	71	1-452-094-00	MAGNET, ROTATABLE DIS	•
61	8-451-295-43			72	X-4309-608-0	PERMALLOY ASSY, CONVE	RGENCE
62	1-452-277-00	MAGNET, BMC		73	3-701-007-00	BAND, BINDING	
02	*A-1638-055-A	C BOARD, COMPLETE					

### **SECTION 7**

### **ELECTRICAL PARTS LIST**

The components identified by shading and marked A are critical

Replace only with the part number specified.

Les composants identifies par une trame et une marque /r̂ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie. Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

All variable and adjustable resistors have characteristic curve B, unless otherwise noted. **RESISTORS** 

All resistors are in ohms

F · nonflammable

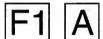
When indicating parts by reference number, please include the board name.

**CAPACITORS** 

COILS

MF: mF, PF: mmF

MMH: mH, µH: mH





REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	ON		REMARK
	*A-1624-050-A	F1 BOARD, COMPLETE		C101	1-126-963-11	ELECT	4.7MF	20%	50V V-C21731
					1-128-551-11	ELECT	22MF	20%	50V
	< CON	NECTOR >				(KV-C2	171D/C2173	E/C2171K	/C2171K
		PIN, CONNECTOR (POWER)		C102	1-126-966-11		33MF	20%	50V
N604	*1-695-292-11	PIN, CONNECTOR (POWER)		C103	1-126-966-11		33MF	20%	50V
	777.0			C104		CERAMIC CHIP		10%	50V
	< FUS	E >		C105 C106	1-164-004-11	CERAMIC CHIP		10% 10%	25V 50V
601	1-576-232-21	FUSE (H.B.C.) 5.0A/250V		C100	1-104-232-11	CEMMIC CHIP	O.OIM	10%	301
:: # <i>7</i>	1-533-230-11	HOLDER, FUSE : F601		C107	1-164-346-11	CERAMIC CHIP	1MF		16V
3 B & MENTS 36 5 38		********		C108		CERAMIC CHIP		10%	50V
	< SWI	TCH >		C109		CERAMIC CHIP		10%	50V
LEA MINE LAS	A SETULE SERVICE S	TERRESPONDENCE		C112		CERAMIC CHIP		5%	50V
601	4 - 1 - 571 - 433 - 41	SWITCH, PUSH (AC POWER)		C113	1-126-967-11	ELECT	47MF	20%	16V
*****	*******	********	******	C114	1-164-346-11	CERAMIC CHIP	1MF		16V
				C115		CERAMIC CHIP		5%	50V
	*A-1632-289-A	A BOARD, COMPLETE (KV-C	2173B)	C117		CERAMIC CHIP		10%	25V
		***********		C118		CERAMIC CHIP		10%	16V
	*A-1632-294-A	A BOARD, COMPLETE (KV-C	2171D)	C119	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
	*A-1632-290-A	A BOARD, COMPLETE (KV-C	2173E)	C120	1-164-337-11	CERAMIC CHIP	2.2MF		16V
	1002 150 11	******	,	C121	1-126-967-11		47MF	20%	16V
	*A-1632-325-A	A BOARD, COMPLETE (KV-C	2171K)	C122	1-126-967-11	ELECT	47MF	20%	16V
		******		C123	1-163-090-00			0.25P1	
	*A-1632-370-A	A BOARD, COMPLETE (KV-C	2171KR)	C124	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
				C125	1-164-337-11	CERAMIC CHIP	2.2MF		16V
'P1	*1-535-084-00	1P TERMINAL PIN		C126		CERAMIC CHIP			16V
				C127	1-126-966-11		33MF	20%	50V
	< CAE	PACITOR >		C128	1-164-232-11			10%	50V
1	1_162_000_11	CERAMIC CHIP 0.001MF	10% 50V	C129	1-164-232-11	CERAMIC CHIP	U.UIMF	10%	50V
2		CERAMIC CHIP 0.001MF	10% 50V	C130	1-216-295-91	METAL GLAZE	0 5%	1/101	W.
3	1-126-964-11		20% 50V	C131	1-126-967-11		47MF	20%	16V
4		CERAMIC CHIP 0.1MF	10% 25V	C132	1-126-967-11		47MF	20%	16V
7	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C134		CERAMIC CHIP		10%	50V
^			400	C135	1-126-967-11	ELECT	47MF	20%	16V
8 10		CERAMIC CHIP 0.01MF	10% 50V	0137	1 162 122 00	CDDAWIC CUIT	470pp	Eo.	50V
10 11		CERAMIC CHIP 0.001MF CERAMIC CHIP 0.001MF	10% 50V 10% 50V	C137 C139		CERAMIC CHIP		5% 10%	50V
12		CERAMIC CHIP 0.00IMF	10% 30V	C142				5%	50V
13	1-126-933-11		20% 16V	C143	1-104-665-11		100MF	20%	16V
1 -	4 460 465 33	APPANEA AND 222	F0					(K	V-C217
15 16		CERAMIC CHIP 33PF	5% 50V	0144	1 160 630 44	CEDANTS SUTE	1100		16V
16 17		CERAMIC CHIP 0.047MF CERAMIC CHIP 0.1MF	10% 25V 10% 25V	C144 C145	1-162-638-11	CERAMIC CHIP	1MF 0 5%	1/101	
19		CERAMIC CHIP 0.1MF	10% 25V 10% 50V	C143	1-410-433-31	METAL GLAZE	0 3%	KV-C217L	D/C217
23		CERAMIC CHIP 100PF	5% 50V	C146	1-216-295-91	METAL GLAZE	0 5%	1/101	N
							(	KV-C217L1	
24		CERAMIC CHIP 47PF	5% 50V						
30	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C149	1-216-295-91	METAL GLAZE	0 5%	1/101	N



/									
REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
C152 C153	1-164-004-11 1-164-337-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 2.2MF	10%	25V 16V	C322 C323	1-163-009-11 1-164-004-11	CERAMIC CHIP 0.1M	F 10%	50V 25V
C154	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	C324	1-164-004-11	CERAMIC CHIP 0.1M		25V
	1-163-113-00		5%	7-C2173B) 50V	C325 C326	1-164-004-11 1-164-161-11	CERAMIC CHIP 0.00	22MF 10%	25V 50V
C155	1-163-099-00	(KV-C2171D/C2173E) CERAMIC CHIP 18PF (KV-C2171D/C2173E)	5%	50V	C327 C328 C329	1-136-165-00 1-164-337-11 1-164-004-11	FILM 0.1M CERAMIC CHIP 2.2M CERAMIC CHIP 0.1M	F	50V 16V 25V
C157	1-163-113-00	CERAMIC CHIP 68PF	5%	50V 7-C2173B)	C330 C331	1-163-017-00 1-165-320-11	CERAMIC CHIP 0.00		50V
	1-163-105-00	CERAMIC CHIP 33PF (KV-C2171D/C2173E)	5%	50V	C332	1-163-097-00	CERAMIC CHIP 15PF	5%	16V 50V
C160	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	C334 C335	1-163-016-00 1-164-004-11	CERAMIC CHIP 0.00		50V 25V
C162	1-163-022-00	CERAMIC CHIP 0.012MF	10%	50V	C336	1-126-933-11			16V
C163	1-163-141-00	CERAMIC CHIP 0.001MF	5%	7-C2173B) 50V	C337 C338	1-164-489-11 1-164-004-11		F 10%	16V 25V
C164	1-163-119-00	CERAMIC CHIP 120PF	5% (KV	7-C2173B) 50V	C339 C342	1-164-004-11 1-126-964-11	CERAMIC CHIP 0.1MI ELECT 10MF		25V 50V
C165	1-126-933-11	ELECT 100MF	20%	16V	C346	1-163-133-00	CERAMIC CHIP 470PI		50V
C201 C202	1-164-005-11 1-163-137-00	CERAMIC CHIP 0.47MF CERAMIC CHIP 680PF	5%	25V 50V	C347 C348	1-163-113-00 1-163-113-00	CERAMIC CHIP 68PF CERAMIC CHIP 68PF		5 0 V 5 0 V
C203 C204	1-126-964-11 1-164-182-11	ELECT 10MF CERAMIC CHIP 0.0033MF	20% 10%	50V 50V	C349 C350	1-163-113-00 1-165-320-11	CERAMIC CHIP 68PF CERAMIC CHIP 0.47M	5%	50V
C205	1-164-005-11	CERAMIC CHIP 0.47MF	10.0	25V	C351				16V
C206	1-164-346-11	CERAMIC CHIP 1MF	•	16V	C352	1-164-004-11 1-163-109-00	CERAMIC CHIP 0.1M CERAMIC CHIP 47PF	F 10% 5%	2 5 V 5 O V
C207 C208	1-137-613-11 1-164-346-11	FILM 0.0018MF CERAMIC CHIP 1MF	2%	100V 16V	C353 C355	1-126-967-11 1-163-113-00	ELECT 47MF CERAMIC CHIP 68PF	20% 5%	16V 50V
C209	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V	C359	1-164-005-11	CERAMIC CHIP 0.47M		25V
C210 C211	1-164-005-11 1-164-005-11	CERAMIC CHIP 0.47MF CERAMIC CHIP 0.47MF		25V 25V	C361 C362	1-126-964-11 1-163-109-00	ELECT 10MF CERAMIC CHIP 47PF	20%	5 O V
C212 C215	1-164-005-11	CERAMIC CHIP 0.47MF	4.00	25V	C363	1-163-101-00	CERAMIC CHIP 22PF	5% 5%	5 <b>O</b> V 5 <b>O</b> V
C216	1-163-023-00 1-163-011-11	CERAMIC CHIP 0.015MF CERAMIC CHIP 0.0015MF	10% 10%	50V 50V	C365	1-163-101-00	(KV- CERAMIC CHIP 22PF	-C2173B/C2171 5%	.D/C2173E) 5 <b>O</b> V
C219	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V	C382	1-126-964-11	ELECT 10MF	20%	5 <b>0</b> V
C220 C221	1-163-011-11 1-163-037-11	CERAMIC CHIP 0.0015MF CERAMIC CHIP 0.022MF	10% 10%	50V 25V	C383 C399	1-163-101-00 1-163-097-00	CERAMIC CHIP 22PF CERAMIC CHIP 15PF	5% 5%	5 <b>O</b> V 5 <b>O</b> V
C222 C225	1-163-037-11 1-130-489-00	CERAMIC CHIP 0.022MF FILM 0.033MF	10% 5%	25V 50V	C401 C402	1-126-967-11 1-163-017-00	ELECT 47MF CERAMIC CHIP 0.004	20%	16V
C226	1-130-489-00		5%	50V					10A
C227	1-163-020-00	CERAMIC CHIP 0.0082MF	10%	50V	C403 C404	1-126-967-11		7MF 10% 20%	50 V 16 V
C228 C229	1-163-020-00 1-164-346-11	CERAMIC CHIP 0.0082MF CERAMIC CHIP 1MF	10%	50V 16V	C406 C407	1-126-964-11 1-164-346-11		20%	50 V 16 V
C301	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	C409	1-164-005-11	CERAMIC CHIP 0.47M	F	25 V
C302 C303	1-163-009-11 1-163-131-00	CERAMIC CHIP 0.001MF CERAMIC CHIP 390PF	10%	50V	C410		CERAMIC CHIP 0.47M		25 V
C305	1-164-004-11	CERAMIC CHIP 390PF	5% 10%	50V 25V	C411 C418	1-126-967-11 1-163-121-00	ELECT 47MF CERAMIC CHIP 150PF	20% ' 5%	16 V 50 V
C306 C307	1-126-933-11	ELECT 100MF	20%	16V	C420	1-216-295-91	METAL GLAZE 0	5% 1/10	W
	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C421	1-126-966-11	ELECT 33MF	20%	50 V
C308 C309	1-164-004-11 1-164-004-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF	10% 10%	25V 25V	C422 C423	1-163-121-00 1-126-967-11	CERAMIC CHIP 150PF ELECT 47MF	5% 20%	50 V 15 V
C310	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C425	1-163-017-00	CERAMIC CHIP 0.004	7MF 10%	50 V
C311 C312	1-164-004-11 1-164-004-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF	10% 10%	25V 25V	C426 C427	1-164-346-11 1-126-967-11	CERAMIC CHIP 1MF	20%	15 V 15 V
C313		CERAMIC CHIP 0.1MF	10%	25V	C428		CERAMIC CHIP 1MF	-**	15 V
C314 C315	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C429	1-164-232-11	CERAMIC CHIP 0.01M		50 V
C316	1-164-004-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF	10% 10%	25V 25V	C430 C431	1-126-967-11 1-163-017-00	ELECT 47MF CERAMIC CHIP 0.004	20% 7MF 10%	15 <b>▼</b> 50 <b>▼</b>
C318		CERAMIC CHIP 0.1MF	10%	25V	C432	1-126-967-11	ELECT 47MF	7MF 10% 20%	15 V
C320 C321	1-126-967-11 1-163-009-11	ELECT 47MF CERAMIC CHIP 0.001MF	20% 10%	16V 50V	C433 C434		CERAMIC CHIP 0.1MF CERAMIC CHIP 1MF	10%	25 <b>√</b> 16 <b>√</b>

									Α
REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
C435 C436 C437	1-126-933-11 1-163-133-00 1-164-346-11	ELECT 100MF CERAMIC CHIP 470PF CERAMIC CHIP 1MF	20% 5%	16V 50V 16V	C1128 C1129	1-162-568-11	CERAMIC CHIP 0.022MF CERAMIC CHIP 0.33MF	10%	25V 25V
C438 C445 C1002 C1003 C1004	1-164-004-11 1-164-004-11 1-163-037-11	CERAMIC CHIP 470PF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.022MF CERAMIC CHIP 15PF	5% 10% 10% 10% 5%	50V 25V 25V 25V 50V	C1130 C1131 C1132 C1133 C1134		CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF ELECT 47MF	20% 10% 10% 20% 20%	50V 25V 25V 16V 50V
C1005 C1006 C1007 C1008 C1009	1-163-037-11 1-163-125-00	CERAMIC CHIP 0.001MF CERAMIC CHIP 0.022MF CERAMIC CHIP 220PF CERAMIC CHIP 220PF CERAMIC CHIP 15PF	10% 10% 5% 5% 5%	50V 25V 50V 50V 50V	C1135 C1136 C1137 C1139	1-163-095-00 1-164-004-11	CERAMIC CHIP 220PF CERAMIC CHIP 0.1MF CERAMIC CHIP 12PF CERAMIC CHIP 0.1MF	5% 10% 5% 10%	50V 25V 50V 25V
C1011 C1013 C1015 C1016 C1018	1-164-346-11 1-164-232-11 1-163-009-11	CERAMIC CHIP 0.01MF CERAMIC CHIP 1MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.001MF CERAMIC CHIP 0.1MF	10% 10% 10% 10%	50V 16V 50V 50V 25V	CF101 CF102	1-409-430-11 1-404-134-00	TRAP, CERAMIC TRAP, CERAMIC (KV-C2173 TRAP, CERAMIC (5.5MHZ) (KV-C2171D/C2173E FILTER, CERAMIC	·	/C2171KR)
C1019 C1020	1-164-004-11 1-128-551-11	CERAMIC CHIP 0.1MF ELECT 22MF (KV-C2171D/C2173E	10% 20%	25V 50V	CF104		FILTER, CERAMIC (KV-C21 FILTER, CERAMIC (KV-C21711		/C2171KR)
C1021 C1024	1-164-004-11 1-163-009-11	CERAMIC CHIP 0.1MF	10% 10%	25V 50V	CF106 CF107		FILTER, CERAMIC FILTER, CERAMIC (KV-C21		
C1025 C1026 C1027 C1028 C1029	1-164-004-11 1-164-004-11	ELECT 47MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF	20% 10% 10% 10% 10%	16V 25V 25V 25V 25V	CF108 SWF101 SWF102	1-579-273-11 1-760-244-11	FILTER, CERAMIC (KV-C21 FILTER, SURFACE WAVE FILTER, SURFACE WAVE (KFILTER, SURFACE WAVE (KV-C2171D/C2173E	V-C2173	
C1030 C1031 C1032 C1033			10% 10% 10% 20% 4/C2171K	25V 25V 25V 50V (/C2171KR)	CN001 CN002 CN003	1-695-302-11 *1-568-882-51	NECTOR >  CONNECTOR, BOARD TO BOAPIN, CONNECTOR 7P PIN, CONNECTOR 4P		, 021/ IMM,
C1034		CERAMIC CHIP 1MF		16V		< DIO	DE >		
		101 - C1139 FITTED ON > < KV-C2173B/C2173E >			D6 D7		DIODE UMZ12N-T106 DIODE 1SS355		
C1101 C1102 C1103 C1104	1-163-093-00		5% 5% 10% 20%	50V 50V 25V 50V	D9 D11 D101	8-719-988-62 8-719-988-62 8-719-977-81	DIODE 1SS355 DIODE 1SS355 DIODE DTZ33B		
C1105 C1106	1-126-964-11	ELECT 10MF CERAMIC CHIP 0.1MF	20% 10%	50V 25V	D102 D103		DIODE DAN202K (KV-C2173 DIODE DAN202K (KV-C2173B/C2171D		/C2171vn\
C1107 C1108 C1110	1-126-967-11 1-126-964-11 1-163-809-11	ELECT 47MF ELECT 10MF CERAMIC CHIP 0.047MF	20% 20% 10%	16V 50V 25V	D108 D201	8-719-914-42	DIODE DAN202K (KV-C2171 DIODE DA204K		
C1111 C1112 C1113 C1116 C1117	1-164-489-11 1-163-137-00 1-126-967-11	CERAMIC CHIP 0.22MF CERAMIC CHIP 0.22MF CERAMIC CHIP 680PF ELECT 47MF CERAMIC CHIP 0.1MF	10% 10% 5% 20% 10%	16V 16V 50V 16V 25V	D301 D303 D304 D305 D314	8-719-988-62 8-719-988-62 8-719-988-62	DIODE 1SS355 DIODE 1SS355 DIODE 1SS355 DIODE 1SS355 DIODE BAS216		
C1118 C1119 C1120	1-126-967-11 1-126-967-11	ELECT 47MF	20% 20% 5%	16V 16V 50V	D315 D317 D380 D401	8-719-914-42 1-216-295-91	DIODE 1SS355 DIODE DA204K METAL GLAZE 0 5% DIODE UMZ12N-T106	1/10	W
C1122 C1123 C1124	1-126-967-11 1-164-004-11		20% 10% 10%	16V 25V 25V	D402 D404	8-719-047-41 8-719-047-41	DIODE UMZ12N-T106 DIODE UMZ12N-T106		
C1125 C1126 C1127	1-163-117-00	CERAMIC CHIP 0.47MF CERAMIC CHIP 100PF CERAMIC CHIP 100PF	10% 5% 5%	16V 50V 50V	D405 D406 D407 D408	8-719-047-41 8-719-047-41	DIODE UMZ12N-T106 DIODE UMZ12N-T106 DIODE UMZ12N-T106 DIODE UMZ12N-T106		



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
D409 D410 D411 D1002 D1101	8-719-047-41 8-719-047-41 8-719-047-41 8-719-914-43 8-719-988-62	DIODE UMZ12N-T106 DIODE UMZ12N-T106 DIODE UMZ12N-T106 DIODE DAN202K DIODE 1SS355 (KV-C2)	173B/C2173E)	L401 L1001 L1002 L1003 L1101	1-408-419-00 1-408-419-00 1-410-999-11	INDUCTOR INDUCTOR CHIP	68UH 68UH 3.3UH	7-C2173B/C2173E)
D1102	8-719-820-71	DIODE 1SV214 (KV-C2	173B/C2173E)	T101	1-403-686-11	COIL		
	< IC	>			< TRA	ANSISTOR >		
IC001	8-752-857-00 8-759-334-20	IC CXP85340A-116Q-TI IC ST24E32M6TR	171D/C2171K/C2171KR)	Q4 Q5 Q11 Q12	8-729-920-74 8-729-920-74 8-729-920-74	TRANSISTOR DTC: TRANSISTOR 2SC: TRANSISTOR 2SC: TRANSISTOR 2SC:	2412K-QR 2412K-QR 2412K-OR	
IC003	8-759-041-54			Q14	8-729-920-74	TRANSISTOR 2SC	2412K-QR	
IC101 IC201 IC202	8-759-277-66	IC TDA9814T/V2 (KV-C IC TDA6612-5X-GEG	173E/C2171K/C2171KR) C2173B)	Q102 Q103 Q104 Q105 Q107	8-729-900-53 8-729-900-53 8-729-900-53	TRANSISTOR DTC: TRANSISTOR DTC: TRANSISTOR DTC: TRANSISTOR DTC: TRANSISTOR 2SC:	114EK (KV- 114EK (KV- 114EK (KV-	·C2173B) ·C2173B)
IC301 IC302 IC303 IC401 IC1001	8-759-288-85 8-759-251-56 8-752-069-53	IC TDA8366H-N3 IC TDA4665T-T IC TDA8395T IC CXA1855Q-T6 IC CF72416DW-R		Q108 Q109 Q114 Q116 Q117	8-729-907-26 8-729-920-74 8-729-901-01	TRANSISTOR IMX TRANSISTOR IMX TRANSISTOR 2SC TRANSISTOR DTC TRANSISTOR DTC	1 2412K-QR 144EK (KV-	C2173B/C2171D) C2173B/C2171D)
IC1002 IC1003 IC1101	8-759-336-09 8-759-361-19 8-759-300-71	IC CF70200FN-R/C (KV-CF70203FN-F (KV-CF70209FN-R (KV-CF70209FN-R (KV-CF70209FN-R (KV-CF70200FN-R))	C2171D/C2171K) C2171KR)	Q120 Q121 Q123 Q124 Q125	8-729-216-22 8-729-901-01 8-729-901-01	TRANSISTOR 2SAI TRANSISTOR DTCI TRANSISTOR DTCI TRANSISTOR DTCI	1162-G (KV 144EK 144EK	
	< 800	CKET >		Q126	8-729-901-01	TRANSISTOR DTC1	144EK (KV-	C2171K/C2171KR)
J401	1-766-296-11 < COI	CONNECTOR, DUAL SCAN	<b>T</b>	Q127 Q128 Q130 Q131	8-729-901-01 8-729-920-74	TRANSISTOR DTC1 TRANSISTOR DTC1 TRANSISTOR 2SC2 TRANSISTOR 2SA1	L44EK (KV- 2412K-QR	C2171K/C2171KR) C2171K/C2171KR)
L1 L3 L100 L101 L102	1-408-419-00 1-410-989-11 1-408-609-41	INDUCTOR CHIP 0.470		Q132 Q133 Q134 Q301 Q304	8-729-920-74 8-729-900-53 8-729-920-74	TRANSISTOR 2SC2 TRANSISTOR 2SC2 TRANSISTOR DTC1 TRANSISTOR 2SC2 TRANSISTOR 2SC2	2412K-QR 114EK 2412K-OR	
L103 L104 L105	1-408-609-41 1-414-170-11 1-408-406-00 1-408-410-00	INDUCTOR CHIP 100UF INDUCTOR 5.6UF INDUCTOR 12UH	I (KV-C2173B) I (KV-C2173B) .73E/C2171K/C2171KR)	Q312 Q313 Q314 Q380 Q381	8-729-920-74 8-729-920-74 8-729-900-53 8-729-920-74 8-729-920-74	TRANSISTOR 2SC2	412K-QR 14EK 412K-QR	
L106	1-216-295-91	METAL GLAZE 0	5% 1/10W	Q399	8-729-901-01			C2173B)
L107 L108	1-410-985-11 1-408-414-00 1-408-416-00	INDUCTOR 39UH	(KV-C2173B)  IH (KV-C2173B)  .73E/C2171K/C2171KR)	Q401 Q402 Q403 Q404	8-729-920-74 8-729-920-74 8-729-920-74 8-729-920-74	TRANSISTOR 2SC2	412K-QR 412K-QR	
L109 L110 L111 L112 L201	1-412-004-31 1-414-170-11	INDUCTOR CHIP 22UH INDUCTOR CHIP 6.8UH INDUCTOR CHIP 100UH INDUCTOR CHIP 4.7UH INDUCTOR 4.7MM		Q406 Q407 Q408 Q1001	8-729-920-74	TRANSISTOR DTC1 TRANSISTOR 2SC2	23EK 412K-QR	
L307 L308 L309 L310 L313	1-408-609-41 1-408-424-00 1-408-424-00 1-408-407-00 1-216-295-91	INDUCTOR 180UE INDUCTOR 180UE INDUCTOR 6.8UE		JR3 JR8 JR9 JR10 JR12	1-216-295-91 1-216-295-91 1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE 0 METAL GLAZE 0 METAL GLAZE 0	5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W
L315		INDUCTOR CHIP 15UH		JR13	1-216-295-91			1/10W

Α
---

								A
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	ON	REMARK
JR14 JR15 JR16	1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE 0	5% 1/10W 5% 1/10W 5% 1/10W	R42 R43 R44	1-216-073-00 1-216-073-00 1-216-121-91	METAL GLAZE METAL GLAZE METAL GLAZE	10K 5	% 1/10W % 1/10W % 1/10W
JR17	1-216-295-91		5% 1/10W	R46	1-216-049-91	METAL GLAZE		% 1/10W
JR18 JR19 JR20	1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE 0	5% 1/10W 5% 1/10W 5% 1/10W	R47 R49 R50	1-216-073-00 1-216-025-91 1-216-049-91	METAL GLAZE METAL GLAZE METAL GLAZE	100 5	% 1/10W % 1/10W % 1/10W
JR25 JR26	1-412-006-31 1-412-006-31		2,2011	R51 R52	1-216-049-91 1-216-049-91	METAL GLAZE METAL GLAZE	1K 5	% 1/10W % 1/10W
JR28 JR29	1-216-296-91 1-412-006-31	INDUCTOR CHIP 10UH	5% 1/8W	R53 R54	1-216-073-00 1-216-049-91	METAL GLAZE METAL GLAZE		% 1/10W % 1/10W
JR51 JR52	1-216-296-91	(KV-C2171D/C217	5% 1/8W 73E/C2171K/C2171KR) 5% 1/10W	R55 R56	1-216-025-91 1-216-025-91	METAL GLAZE	100 5	% 1/10W % 1/10W
JR55	1-216-295-91		5% 1/10W 5% 1/8W	R57 R58	1-216-025-91	METAL GLAZE	100 5 100 5	% 1/10W % 1/10W
JR56 JR59	1-216-296-91 1-216-296-91	METAL GLAZE 0	5% 1/8W 5% 1/8W	R59 R60	1-216-121-91 1-216-025-91	METAL GLAZE	1M 5%	1/10W
JR60 JR61	1-216-296-91 1-216-296-91	METAL GLAZE 0	5% 1/8W 5% 1/8W	R61 R62	1-216-025-91 1-216-073-00	METAL GLAZE METAL GLAZE	100 5 10K 5	% 1/10W
JR62 JR65	1-216-296-91 1-216-296-91		5% 1/8W 5% 1/8W	R63 R64	1-216-073-00 1-216-073-00	METAL GLAZE METAL GLAZE	10K 5	
JR71 JR113	1-216-296-91		5% 1/8W 5% 1/10W	R66 R67	1-216-033-00 1-216-025-91	METAL GLAZE METAL GLAZE	220 5 100 5	% 1/10W
UNILI	1 210 233 31		73E/C2171K/C2171KR)	R68	1-216-025-91	METAL GLAZE	100 5	
JR114 JR115	1-216-295-91 1-216-295-91		5% 1/10W 5% 1/10W	R69 R70	1-216-025-91 1-216-049-91	METAL GLAZE	100 5°	
JR120	1-216-295-91		(KV-C2171K/C2171KR) 5% 1/10W	R73 R77	1-216-677-11	METAL CHIP METAL GLAZE	12K 0	.50% 1/1 <b>OW</b>
JR122	1-216-295-91	METAL GLAZE 0	73E/C2171K/C2171KR)	R78	1-216-037-00	METAL GLAZE	330 5	% 1/1 <b>0</b> W
JR123	1-216-295-91		5% 1/10W	R82 R83	1-216-073-00 1-216-065-00	METAL GLAZE METAL GLAZE	10K 59	% 1/1 <b>O</b> W
JR124	1-216-295-91	METAL GLAZE 0	73E/C2171K/C2171KR) 5% 1/10W	R84 R85	1-216-065-00 1-216-025-91	METAL GLAZE	4.7K 59	% 1/1 <b>O</b> W
JR125	1-216-295-91		173B/C2171D/C2173E) 5% 1/10W (KV-C2173E)	R86	1-216-025-91 1-216-073-00	METAL GLAZE	100 59	
TD126	1 216 205 01	ACTUAL OF A THE O		R88	1-216-065-00	METAL GLAZE	4.7K 59	6 1/1OW
JR126 JR201	1-216-295-91 1-216-295-91	METAL GLAZE 0	5% 1/10W 5% 1/10W 71D/C2171K/C2171KR)	R89 R90 R91	1-216-073-00 1-216-073-00 1-216-049-91	METAL GLAZE METAL GLAZE	10K 59 10K 59 1K 59	1/1OW
JR202	1-216-295-91	METAL GLAZE 0	5% 1/10W 71D/C2171K/C2171KR)	R92	1-216-049-91		1K 59	
JR302	1_216_205_01		70. 1/100	R93 R94	1-216-049-91	METAL GLAZE	1K 59	6 1/1OW
JR408	1-216-295-91	METAL GLAZE 0	5% 1/10W	R96	1-216-039-00 1-216-071-00	METAL GLAZE METAL GLAZE	390 59 8.2K 59	1/1OW
JR1004 R2	1-216-295-91		5% 1/10W 5% 1/10W	R97	1-216-049-91		1K 59	
R5	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R101	1-216-049-91 1-208-806-11	METAL CHIP		50% 1/1DW
R6 R20	1-216-025-91 1-216-073-00		5% 1/10W 5% 1/10W	R103 R104	1-208-810-11 1-216-073-00	METAL CHIP METAL GLAZE	15K 0. 10K 59	.50% 1/10W 6 1/10W
R21	1-216-182-00		5% 1/8W	R105	1-216-025-91		100 59	
R24 R25	1-216-073-00	METAL GLAZE 10K	5% 1/10W 5% 1/10W	R106 R107	1-216-025-91 1-216-053-00	METAL GLAZE	100 5% 1.5K 5%	1/10 W
R26 R27	1-216-174-00 1-216-065-00		5% 1/8W 5% 1/10W	R108 R109	1-216-059-00 1-216-180-00	METAL GLAZE METAL GLAZE	2.7K 5% 180 5%	
R29	1-216-049-91		5% 1/10W	R110	1-216-057-00	METAL GLAZE	2.2K 5%	1/1DW
R31 R33	1-216-049-91 1-216-063-00	METAL GLAZE 1K SMETAL GLAZE 3.9K	5% 1/10W 5% 1/10W	R111 R112	1-216-057-00 1-216-065-00		2.2K 5% 4.7K 5%	
R35 R37	1-216-065-00 1-216-049-91	METAL GLAZE 4.7K	-	R113 R114	1-216-073-00 1-216-073-00		10K 5%	1/1)W
R38	1-216-049-91		5% 1/10W	R115	1-218-755-11	METAL CHIP		50% 1/10 W
R41	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R116	1-216-113-00	METAL GLAZE	470K 5%	1/1) <b>W</b>



لنتا											
REF.NO.	PART NO.	DESCRIPTION	N		REMARK	REF.NO.	PART NO.	DESCRIPTION	N		REMARK
R117	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R185	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R118	1-216-107-00	METAL GLAZE	270K		1/10W	R186	1-216-059-00	METAL GLAZE	2.7K		1/10W
R119	1-216-049-91		1K	5%	1/10W	R188	1-216-057-00		2.2K		1/10W
R120	1-216-035-00	METAL GLAZE	270	5%	1/10W				2121		C2171K/C2171KR)
R121	1-216-035-00	METAL GLAZE	270	5%	1/10W	R189	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R122	1-216-089-91		47K	5%	1/10W					(KV-C	2171K/C2171KR)
R123	1-216-089-91		47K	5%	1/10W	R190	1-216-057-00	METAL GLAZE	2.2K		1/10W
R124 R125	1-216-031-00	METAL GLAZE	180	5%	1/10W	-404					2171K/C2171KR)
K125	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	R191	1-216-057-00	METAL GLAZE	2.2K		1/10W 2171K/C2171KR)
R126	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W					(2	,22, 111, 022, 1111,
R127	1-216-041-00		470	5%	1/10W	R193	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R128	1-216-043-91		560	5%	1/10W						(KV-C2173B)
R130	1-216-043-91		560	5%	1/10W	R194	1-216-180-00	METAL GLAZE	180	5%	1/8W
R131	1-216-043-91	METAL GLAZE	560	5%	1/10W	R195	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R134	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R196	1-216-017-91	METAL GLAZE	47	5%	1/10W
	1 210 057 00				C2171K/C2171KR)	R197	1-216-041-00	METAL GLAZE	470	5%	1/10W
R135	1-216-057-00	METAL GLAZE	2.2K		1/10W	R198	1-216-029-00	METAL GLAZE	150	5%	1/10W 1/10W
					C2171K/C2171KR)	R199	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R136	1-216-081-00	METAL GLAZE	22K	5%	1/10W						2171K/C2171KR)
-405							1-216-051-00	METAL GLAZE	1.2K		1/10W
R137	1-216-081-00	METAL GLAZE	22K	5%	1/10W						(KV-C2173B)
R139 R140	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	2000	4 046 01- 11				4.14.4
R140 R141	1-216-089-91 1-216-065-00	METAL GLAZE METAL GLAZE	47K	5%	1/10W	R200	1-216-047-91		820	5%	1/10W
R142	1-216-089-91		4.7K 47K	5% 5%	1/10W 1/10W	R201	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
N144	1-210-009-91	METAL GLAZE	4/1	2%	1/10W	R202 R203	1-216-091-00 1-216-067-00	METAL GLAZE	56K	5%	1/10W
R143	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R204	1-216-025-91	METAL GLAZE METAL GLAZE	5.6K 100	5% 5%	1/10W 1/10W
				(KV	-C2173B/C2171D)		1 210 025 71	MITAL GUAZE	100	J'0	1/104
R144	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	R205	1-216-025-91	METAL GLAZE	100	5%	1/10W
R145 R146	1-216-059-00 1-216-057-00	METAL GLAZE METAL GLAZE	2.7K 2.2K	5% 5%	1/10W	R206	1-216-049-91	METAL GLAZE	1K	5%	1/10W
WITTO	1-210-037-00	METAL GLAZE	2.4N	3%	1/10W	R207 R210	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R147	1-216-031-00	METAL GLAZE	180	5%	1/10W	R211	1-216-025-91 1-216-025-91	METAL GLAZE METAL GLAZE	100 100	5% 5%	1/10W 1/10W
	1-016-000 00	MEMAT OT ACE	220	E0,	(KV~C2173B)	2012	1 016 053 00		4		4.444
	1-216-033-00	METAL GLAZE	220 71D/C2	5% 173F/	1/10W C2171K/C2171KR)	R213 R216	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R148	1-216-057-00	METAL GLAZE	2.2K		1/10W	R217	1-216-685-11 1-216-031-00	METAL CHIP METAL GLAZE	27K 180		1/10W
	2 220 037 00		2.21	3.0	1/1011	R219	1-216-031-00	METAL GLAZE	100	5% 5%	1/10W 1/10W
R149	1-216-049-91	METAL GLAZE	1K	5%	1/10W	R220	1-216-174-00	METAL GLAZE	100	5%	1/8W
R150	1-216-295-91	METAL GLAZE	0	5%	1/10W					30	2/011
R151	1-216-081-00	METAL GLAZE	22K	5%	1/10W	R221	1-216-025-91	METAL GLAZE	100	5%	1/10W
R152	1-216-174-00	METAL GLAZE	100	5%	1/8W	R222	1-216-025-91	METAL GLAZE	100	5%	1/10W
R153	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	R223	1-216-029-00	METAL GLAZE	150	5%	1/10W
D1E4	1 015 050 00					R224	1-216-025-91		100	5%	1/10W
R154 R155	1-216-069-00		6.8K		1/10W	R301	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R156	1-216-089-91 1-216-073-00		47K	5% 5%	1/10W	D202	1 016 005 05	MIMA	^	F6	4 /4 0**
R157	1-216-073-00		10K 0	5% 5%	1/10W 1/10W	R302	1-216-295-91	METAL GLAZE	0	5%	1/10W
R160	1-216-049-91		1K	5%	1/10W 1/10W	R303 R304	1-216-091-00 1-249-429-11	METAL GLAZE CARBON	56K 10K	5% 5%	1/10W 1/4W
				5.0	-,	77303	T 047-467-11	CULTON	TOV	20	(KV-C2 173E)
R161	1-216-031-00	METAL GLAZE	180	5%	1/10W	R305	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R162	1-216-017-91	METAL GLAZE	47	5%	1/10W						-,
R163	1-216-049-91	METAL GLAZE	1K	5%	1/10W	R308	1-216-025-91		100	5%	1/10W
R164	1-216-025-91		100	5%	1/10W	R309	1-216-025-91	METAL GLAZE	100		1/10W
R165	1-216-089-91	METAL GLAZE	47K	5%	1/10W	R311	1-216-025-91	METAL GLAZE	100	5%	1/10W
R166	1 010 007 01	VDM1. 02.55	100-	F4	4 /4 017	R313	1-216-025-91		100		1/10W
R167	1-216-097-91		100K	5%	1/10W	R315	1-216-025-91	METAL GLAZE	100	5%	1/10W
R168	1-216-073-00 1-216-073-00	METAL GLAZE METAL GLAZE	10K 10K	5% 5%	1/10W	D216	1 216 005 01	MEMAY CTAR	100	ro.	4 /4 027
R170	1-216-073-00	METAL GLAZE	10K	5% 5%	1/10W 1/10W	R316 R317	1-216-025-91		100		1/10W
R171	1-216-035-00	METAL GLAZE	270	5%	1/10W 1/10W	R317	1-216-025-91 1-216-049-91		100		1/10W
_	~ ==0 0JJ~00	GUADE	₽ / V	3.0	TITON	R319	1-216-049-91	METAL GLAZE	1K 100		1/10W
R172	1-216-295-91	METAL GLAZE	0	5%	1/10W	R320	1-216-025-91		100		1/10W 1/10W
R173	1-216-035-00		270	5%	1/10W		0 020 01	GUALE	100	J.0	1,1011
R174	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	R321	1-216-025-91	METAL GLAZE	100	5%	1/10W
R180	1-216-049-91	METAL GLAZE	1K	5%	1/10W	R322	1-216-067-00	METAL GLAZE	5.6K		1/10W
R182	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R326	1-216-077-00	METAL GLAZE	15K		1/10W
p102						R327	1-216-097-91	METAL GLAZE	100K		1/10W
R183	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	R328	1-216-025-91	METAL GLAZE	100	5%	1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
R329 R330 R331 R332 R333	1-216-067-00 1-216-033-00 1-216-033-00 1-216-033-00 1-216-689-11	METAL GLAZE 220 METAL GLAZE 220 METAL GLAZE 220	5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 0.50% 1/10W	R426 R427 R429 R430 R431	1-216-025-91 1-216-188-00 1-216-067-00 1-216-089-91 1-216-188-00	METAL GLAZE METAL GLAZE METAL GLAZE	100 5% 390 5% 5.6K 5% 47K 5% 390 5%	1/10W 1/8W 1/10W 1/10W 1/8W
R334 R340 R341 R342 R352	1-216-111-91 1-216-097-91 1-216-083-00 1-216-073-00 1-216-123-11	METAL GLAZE 100K METAL GLAZE 27K METAL GLAZE 10K		R432 R433 R434 R435 R436	1-216-039-00 1-216-067-00 1-216-025-91 1-216-039-00 1-216-022-00	METAL GLAZE METAL GLAZE METAL GLAZE	390 5% 5.6K 5% 100 5% 390 5% 75 5%	1/10W 1/10W 1/10W 1/10W 1/10W
R354 R355 R356 R364 R365	1-216-025-91 1-216-065-00 1-216-025-91 1-216-041-00 1-216-027-00	METAL GLAZE 4.78 METAL GLAZE 100 METAL GLAZE 470	K 5% 1/10W 5% 1/10W	R437 R438 R439 R440 R441	1-216-073-00 1-216-089-91 1-216-071-00 1-216-025-91 1-216-022-00	METAL GLAZE METAL GLAZE METAL GLAZE	10K 5% 47K 5% 8.2K 5% 100 5% 75 5%	1/10W 1/10W 1/10W 1/10W 1/10W
R366 R367 R368 R370 R371	1-216-079-91 1-216-069-00	METAL GLAZE 220	5% 1/10W K 5% 1/10W	R442 R443 R444 R445 R446	1-216-067-00 1-216-113-00 1-216-067-00 1-216-113-00 1-216-025-91	METAL GLAZE METAL GLAZE METAL GLAZE	5.6K 5% 470K 5% 5.6K 5% 470K 5% 100 5%	1/10W 1/10W 1/10W 1/10W 1/10W
R372 R373 R380 R381 R382	1-216-033-00 1-216-041-00 1-216-222-00 1-216-025-91 1-216-053-00	METAL GLAZE 10K METAL GLAZE 100	5% 1/10W 5% 1/8W	R447 R448 R449 R454 R458	1-216-025-91 1-216-073-00 1-216-071-00 1-216-089-91 1-216-049-91	METAL GLAZE METAL GLAZE METAL GLAZE	100 5% 10K 5% 8.2K 5% 47K 5% 1K 5%	1/10W 1/10W 1/10W 1/10W 1/10W
R383 R384 R385 R386 R387	1-216-053-00	METAL GLAZE 1K METAL GLAZE 470		R461 R464 R465 R473 R474	1-216-034-00 1-216-025-91	METAL GLAZE METAL GLAZE	75 5% 240 5% 100 5% 75 5% 1K 5%	1/1 OW 1/1 OW 1/1 OW 1/1 OW 1/1 OW
R388 R389 R390 R392 R393	1-216-041-00 1-216-089-91 1-216-091-00	METAL GLAZE 470 METAL GLAZE 470 METAL GLAZE 47K METAL GLAZE 56K METAL GLAZE 47K	5% 1/10W 5% 1/10W 5% 1/10W	R482 R483 R484 R485 R486	1-216-073-00 1-216-029-00 1-216-025-91 1-216-025-91 1-216-025-91	METAL GLAZE METAL GLAZE METAL GLAZE	10K 5% 150 5% 100 5% 100 5% 100 5%	1/1 OW 1/1 OW 1/1 OW 1/1 OW 1/1 OW
R394	1-216-057-00	METAL GLAZE 2.21	K 5% 1/10W (KV-C2173B/C2173E)	R487 R488			75 5% 75 5%	1/1 OW 1/1 OW
R395 R399		METAL GLAZE 1K METAL GLAZE 4.71	5% 1/10W (KV-C2173B/C2173E) K 5% 1/8W	R489 R490 R491	1-216-295-91		75 5% 0 5% 0 5%	1/1 OW 1/1 OW 1/1 OW
R401 R402 R403 R404 R405	1-216-039-00 1-216-089-91 1-216-039-00 1-216-089-91	METAL GLAZE 390 METAL GLAZE 47K METAL GLAZE 390 METAL GLAZE 47K METAL GLAZE 390	5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W	R492 R1001 R1002 R1004 R1008	1-216-049-91 1-216-025-91 1-216-049-91	METAL GLAZE METAL GLAZE	0 5% 1K 5% 100 5% 1K 5% 33K 5%	1/L OW 1/L OW 1/L OW 1/L OW 1/L OW
R406 R407 R408 R409 R410	1-216-198-91 1-216-067-00 1-216-067-00		5% 1/8W K 5% 1/10W K 5% 1/10W	R1009 R1010 R1011 R1012 R1014	1-216-053-00 1-216-053-00 1-216-053-00	METAL GLAZE METAL GLAZE METAL GLAZE	100 5% 1.5K 5% 1.5K 5% 1.5K 5% 100 5%	1/  OW 1/  OW 1/  OW 1/  OW 1/  OW
R413 R415 R417 R419 R420	1-216-067-00 1-216-033-00 1-216-067-00	METAL GLAZE 220	K 5% 1/10W 5% 1/10W K 5% 1/10W	R1015 R1016 R1025 R1026 R1027	1-216-049-91 1-216-033-00 1-216-033-00	METAL GLAZE METAL GLAZE METAL GLAZE	100 5% 1K 5% 220 5% 220 5% 220 5%	1/  OW 1/  OW 1/  OW 1/  OW 1/  OW
R421 R422 R423 R424 R425	1-216-022-00 1-216-093-00 1-216-113-00	) METAL GLAZE 75 ) METAL GLAZE 68K	1K 5% 1/10W 5% 1/10W 5% 1/10W 1K 5% 1/10W 5% 1/10W	R1029	1-216-025-91	METAL GLAZE	100 5%	1/  <b>©</b> W



Les composants identifies par une trame et une marque /r. sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked in are critical for safety.

Replace only with the part number specified.

REF.NO.	PART NO.	D. DESCRIPTION		ARK REF.NO.	PART NO.	DESCRIPTION		REMARK	
		101-R1118 FITTED ON > KV-C2173B/C2173E >		CN703	*1-568-882-51	PIN, CONNECTOR 7P			
R1101 R1102 R1103 R1104 R1105	1-216-025-91 1-216-049-91 1-220-149-11 1-216-085-00	METAL GLAZE 100 METAL GLAZE 1K METAL GLAZE 2.2 METAL GLAZE 33K	5% 1/10W 5% 1/10W 10% 1/2W 5% 1/10W 5% 1/10W	D701 D702 D706 D707	8-719-110-14 8-719-991-33 8-719-991-33	DIODE >  DIODE RD9.1ESB3 DIODE 1SS133T-7 DIODE 1SS133T-7 DIODE 1SS133T-7	7 7		
R1106 R1107 R1108 R1109 R1110	1-216-049-91 1-216-121-91 1-216-121-91	METAL GLAZE 1K METAL GLAZE 1M METAL GLAZE 1M	5% 1/10W 5% 1/10W 5% 1/10W 5% 1/10W 5% 1/4W	D708 D709 D710 D711 D713	8-719-991-33 8-719-991-33 8-719-991-33 8-719-302-43 8-719-991-33	DIODE 1SS133T-7 DIODE 1SS133T-7 DIODE 1SS133T-7 DIODE EL1Z DIODE 1SS133T-7	7 7 7		
R1111 R1112 R1113 R1114 R1115	1-216-025-91 1-216-117-00 1-216-158-00 1-216-121-91	METAL GLAZE 100 METAL GLAZE 680K METAL GLAZE 22 METAL GLAZE 1M	5% 1/8W 5% 1/10W	D714 D715 D716 D717 D718 D719	8-719-991-33 8-719-991-33 8-719-991-33 8-719-991-33	DIODE 1SS133T-7' DIODE 1SS133T-7' DIODE 1SS133T-7' DIODE 1SS133T-7' DIODE 1SS133T-7' DIODE 1SS133T-7'	1 1 1		
R1116 R1117 R1118	1-216-073-00	METAL GLAZE 10K	5% 1/10W 5% 1/10W		< CRI	SOCKET >			
KIIIO		SISTOR NETWORK >	10% 1/2W	J701	1-526-990-22	Socket, CRT	MIM	1000	
RA2		RESISTOR, NETWORK (C	HIP TYPE)		< COI	IL >			
RA3	1-236-908-11	RESISTOR, NETWORK (C	HIP TYPE)	L704	1-408-609-41	INDUCTOR	ЗИН		
		RIABLE RESISTOR >		< TRA	NSISTOR >				
RV102		RES, ADJ, CARBON 22K	(KV-C2173B)	Q702 Q703	8-729-119-78 8-729-906-70	TRANSISTOR 2SC27	85-HFE -127		
TU101	< TUI 8-598-045-00	VER > TUNER (BTP-EC411)		Q704 Q705 Q706	8-729-200-17	TRANSISTOR 2SA10 TRANSISTOR 2SC27	91-0 85-HFE		
	< CRY	(STAL >		Q707 Q708	8-729-200-17	TRANSISTOR 2SA10	91-0		
X2 X301 X302 X1001	1-567-505-11 1-567-504-11	VIBRATOR, CERAMIC OSCILLATOR, CRYSTAL OSCILLATOR, CRYSTAL		Q709 Q710	8-729-906-70 8-729-200-17	TRANSISTOR 2SC27 TRANSISTOR BF871 TRANSISTOR 2SA10	-127		
X1101	1-579-689-21	OSCILLATOR, CRYSTAL VIBRATOR, CRYSTAL (K	V-C2173B/C2173E	,		ISTOR >			
******	*******	*******	*********		1-247-791-91			1/4W	
	*A-1638-055-A	C BOARD, COMPLETE		R704 R705 R706 R707	1-216-486-00 1-202-822-00 1-247-815-91 1-247-815-91	SOLID 2. CARBON 22		3W F 1/2W 1/4W	
	< CAF	PACITOR >		R709	1-202-844-00		OK 10%	1/4W 1/2W	
C702 C703 C708 C710 C712	1-102-824-00 1-102-115-00 1-162-114-00 1-107-652-11 1-102-115-00	CERAMIC 0.0047MI	5% 50V 10% 50V F 2KV 20% 250 10% 50V	R712 R714 V R715	1-249-417-11	CARBON 8. SOLID 2. METAL OXIDE 8. CARBON 1K CARBON 22	2K 5% 5%	1/4W 1/2W 3W F 1/4W 1/4W	
C714 C717 C718 C719 C722	1-104-660-91 1-102-114-00 1-102-114-00 1-102-114-00 1-101-880-00	ELECT 47MF CERAMIC 470PF CERAMIC 470PF CERAMIC 470PF CERAMIC 47PF	20% 16V 10% 50V 10% 50V 10% 50V 5% 50V	R718 R720 R722	1-202-848-00	CARBON 220 SOLID 331 CARBON 8.7 SOLID 680 CARBON 1K	10%	1/4W 1/2W 1/4W 1/2W 1/4W	
C723 C724	1-101-880-00 1-101-880-00	CERAMIC 47PF CERAMIC 47PF	5% 50V 5% 50V				K 10%	1/2W 1/2W	
	< CON	NECTOR >		R727 R728	1-247-815-91 1-216-349-00	CARBON 220 METAL OXIDE 1	5% 5%	1/4W 1W F	
CN701 CN702	*1-508-768-00 1-695-915-11	PIN, CONNECTOR (5MM F TAB (CONTACT)	PITCH) 6P	R729		CARBON 220		1/4W	
	7-033-313-11	IAB (CONTACT)		R731	1-249-428-11	CARBON 8.2	K 5%	1/4W	

Les composants identifies par une trame et une marque 🔥 sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie. The components identified by shading and marked 🔨 are critical for safety.

Replace only with the part number

specified.





REF.NO.	PART NO.	DESCRIPTIO	ON		REMARK	REF.NO.	PART NO.	DESCRIPTI	ION		REMARK
R732 R734 R736 R737	1-215-481-00 1-247-807-31 1-216-486-00 1-215-487-00	METAL CARBON METAL OXIDE METAL	330K 1% 100 5% 8.2K 5% 680K 1%	1/4W 1/4W 3W 1/4W	F	C623 C624 C625	1-126-934-91 1-136-165-00 1-126-967-91	ELECT FILM ELECT	220MF 0.1MF 47MF	20% 5% 20%	25V 50V 50V
R739 R741 R744	1-249-417-11 1-202-549-00 1-249-426-11	CARBON SOLID	1K 5% 100 20% 5.6K 5%	1/4W 1/2W 1/4W		C626 C627 C628	1-126-934-91 1-124-120-11 1-126-964-11	ELECT ELECT ELECT	220MF 220MF 10MF	20% 20% 20%	25V 25V 50V
R745 R746	1-249-426-11 1-249-426-11	CARBON CARBON	5.6K 5% 5.6K 5%	1/4W 1/4W		C629 C630 C631	1-126-800-51 1-126-800-51 1-126-965-91	ELECT ELECT ELECT	2200MF 2200MF 22MF	20% 20% 20%	25V 25V 50V
	< VAF	RIABLE RESISTO	R >			C632	1-124-120-11 1-136-516-12	ELECT FILM	220MF 0.1MF	20% <b>20%</b>	25V 300V
RV701 RV702	1-230-641-11 1-241-656-11						1-136-516-12 1-136-516-12		0.1MF 0.1MF	20% 20%	300 <b>7</b>
******	***********	*******	********	*****	******	<b>C636</b> A . C639	1-164-503-61 1-136-165-00	CERAMIC FILM	0.0022MF 0.1MF	20% 5%	400V 50V
	*A-1642-122-A	D BOARD, COM	PLETE ****			C647	1-106-220-00	MYLAR CERAMIC	0.1MF 680PF	10% 10%	100V 2KV
	4-201-023-11 4-202-373-01	•	LATING			C800 C801 C804	1-137-437-11 1-136-153-00 1-136-165-00	FILM FILM FILM	0.0056MF 0.01MF 0.1MF	5% 5% 5%	50V 50V 50V
	< CAI	PACITOR >				C806	1-104-999-11	MYLAR	0.1MF	10%	200V
C502 C503 C504 C506 C507	1-102-824-00 1-136-165-00 1-102-824-00 1-124-480-11 1-109-953-11	CERAMIC FILM CERAMIC ELECT ELECT	470PF 0.1MF 470PF 470MF 2.2MF	5% 5% 5% 20% 20%	50V 50V 50V 25V 50V	C807 C810 C811 C812 C813	1-136-111-00 1-126-772-11 1-102-212-00 1-136-111-00 1-136-759-11	FILM ELECT CERAMIC FILM FILM	1MF 1MF 820PF 1MF 0.039MF	5% 20% 10% 5% 10%	200V 250V 500V 200V 630V
				5%	50V	C814	1-136-549-11	FILM		3%	1.4KV
C509 C510 C511 C513 C514	1-136-165-00 1-126-969-11 1-136-202-11 1-106-220-00 1-136-165-00	FILM BLECT FILM MYLAR FILM	0.1MF 220MF 0.33MF 0.1MF 0.1MF	20% 5% 10% 5%	50V 50V 63V 100V 50V	C814 C815 C816 C817 C818	1-136-549-11 1-136-562-11 1-161-754-00 1-161-754-00 1-162-134-11		0.0106MF 0.0082MF 0.001MF 0.001MF 470PF	10% 10% 10% 10%	1.4KV 400V 2KV 2KV 2KV
C515 C517 C518 C519 C520	1-124-480-11 1-124-480-11 1-102-228-00 1-102-228-00 1-124-480-11	ELECT ELECT CERAMIC CERAMIC ELECT	470MF 470MF 470PF 470PF 470MF	20% 20% 10% 10% 20%	25V 25V 500V 500V 25V	C819 C820 C821 C822 C824	1-136-208-11 1-102-114-00 1-162-114-00 1-107-662-11 1-123-024-21	FILM CERAMIC CERAMIC ELECT ELECT	0.068MF 470PF 0.0047MF 22MF 33MF	10% 10% 20%	250V 50V 2KV 250V 160V
C521 C522 C523 C600 A	1-124-006-11 1-126-964-11 1-136-165-00 1-164-503-61 1-161-964-91	ELECT FILM CERAMIC	10MF 10MF 0.1MF 0.0022MF 0.0047MF	20% 20% 5% <b>20%</b>	25V 50V 50V 400V 250V	C829 C830 C832 C834 C835	1-126-959-00 1-124-903-11 1-126-959-00 1-104-662-91 1-162-318-11		0.47MF 1MF 0.47MF 22MF 0.001MF	20% 20% 20% 20% 10%	50V 50V 50V 25V 500V
C602 A C603 C604 C605 C606	1-161-964-91 1-125-318-00 1-126-968-91 1-124-667-11 1-162-318-11	ELECT (BLOCK) ELECT ELECT	0.0047MF 220MF 100MF 10MF 0.001MF	20% 20% 20% 20% 10%	250V 400V 50V 100V 500V	C836 C838 C906 C908 C909	1-162-117-00 1-102-228-00 1-126-967-91 1-126-967-91 1-124-903-11	ELECT ELECT	100PF 470PF 47MF 47MF 1MF	10% 10% 20% 20% 20%	500V 500V 50V 50V 50V
C607 C608 C611 C612 C613	1-124-120-11 1-109-880-11 1-102-228-00 1-104-799-11 1-124-347-00	FILM CERAMIC ELECT	220MF 0.0015MF 470PF 22MF 100MF	20% 3% 10% 20% 20%	25V 2KV 500V 100V 160V	C910 C1200 C1201 C1202 C1203	1-137-393-11 1-136-165-00 1-136-165-00 1-136-165-00 1-136-169-00	FILM FILM FILM	0.01MF 0.1MF 0.1MF 0.1MF 0.22MF	5% 5% 5% 5% 5%	100V 50V 50V 50V 50V
C614 C615 C616 C617 C618	1-128-526-11 1-111-063-11 1-111-067-11 1-126-183-11 1-136-165-00	ELECT ELECT ELECT	100MF 470MF 0.001F 1000MF 0.1MF	20% 20% 20% 20% 5%	25V 25V 25V 16V 50V	C1204 C1205 C1206 C1207 C1208	1-136-169-00 1-101-005-00 1-101-005-00 1-124-665-11 1-126-963-11	CERAMIC CERAMIC ELECT	0.22MF 0.022MF 0.022MF 100MF 4.7MF	5% 20% 20%	50V 50V 50V 25V 50V
C619 C620 C621 C622	1-102-228-00 1-102-228-00 1-136-165-00 1-104-797-11	CERAMIC FILM	470PF 470PF 0.1MF 0.47MF	10% 10% 5% 20%	500V 500V 50V 100V	C1209 C1210 C1211 C1214	1-126-963-11 1-124-961-11 1-124-961-11 1-104-665-11	ELECT	4.7MF 2.2MF 2.2MF 100MF	20% 20% 20% 20%	50V 50V 50V 25V



Les composants identifies par une trame et une marque /f\, sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked have are critical for safety.

Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1215 C1216 C1217 C1218	1-136-173-00 1-137-366-11 1-137-366-11 1-124-934-91	FILM 0.0022MF FILM 0.0022MF ELECT 220MF	5% 5% 5% 20%	50V 50V 50V 25V	D903 D904 D905 D906 D1201	8-719-923-60 8-719-923-60 8-719-923-60	DIODE MTZJ-T-77-9.1A DIODE MTZJ-T-77-9.1A DIODE MTZJ-T-77-9.1A DIODE MTZJ-T-77-9.1A DIODE RD3.9ESB2	
AND DESCRIPTION OF THE PARTY OF		NECTOR >				< FER	RITE BEAD >	
CN601 A CN602 A CN800	1-508-765-F1 *1-695-292-11 *1-580-798-11	PIN, CONNECTOR (5MM PI PIN, CONNECTOR (5MM PI PIN, CONNECTOR (POMER) CONNECTOR PIN (DY) 6P TAB (CONTACT)	PCH) 3P		FB600 FB601 FB602 FB604 FB605	1-410-397-21 1-410-397-21 1-410-397-21 1-410-396-41	FERRITE BEAD INDUCTOR 1.11 FERRITE BEAD INDUCTOR 1.11 FERRITE BEAD INDUCTOR 1.11 FERRITE BEAD INDUCTOR 0.49 FERRITE BEAD INDUCTOR 0.49	TH TH SUH
CN804 CN901 CN902 CN903 CN904	*1-508-768-00 *1-564-520-11 1-695-299-11 *1-564-516-11 *1-564-509-11	PIN, CONNECTOR (5MM PI PLUG, CONNECTOR 5P CONNECTOR, BOARD TO BOX PLUG, CONNECTOR 13P PLUG, CONNECTOR 6P	PCH) 6P ARD 50P		FB606 FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.10 FERRITE BEAD INDUCTOR 1.10	ТН
CN905 CN1200	*1-564-506-11 *1-568-879-11	PLUG, CONNECTOR 3P PIN, CONNECTOR 4P			IC500 IC600 IC601	8-759-192-71 8-749-010-84 8-749-924-92	IC STR-S6708 IC TLP721(D4)-GR	
D500	0 710 100 05	DIODE DDE 15000			IC602 IC603	8-749-920-61 8-759-144-82	IC SE-135N IC µPC2405HF	
D502 D503 D504 D505	8-719-979-85 8-719-979-85 8-719-991-33 8-719-982-03	DIODE EGP20G DIODE EGP20G DIODE 1SS133T-77 DIODE MTZJ-3.6A			IC604 IC605 IC606 IC800 IC1200	8-759-231-58	IC LM2940CT-9.0 IC μPC393C	
D506 D507 D600 D601 D603	8-719-991-33 8-719-109-85 8-719-510-53 8-719-046-77	DIODE 1SS133T-77 DIODE RD5.1ESB2 DIODE D4SB60L DIODE EM1-V1			IC1201	8-759-502-21 < COI	IC TDA2822M	
D604 D605 D606 D607 D608	8-719-109-97 8-719-046-75 8-719-312-61 8-719-046-78 8-719-046-75	TAB (CONTACT)  PIN, CONNECTOR (5MM PIPLUG, CONNECTOR 5P CONNECTOR, BOARD TO BOY PLUG, CONNECTOR 13P PLUG, CONNECTOR 3P PLUG, CONNECTOR 3P PIN, CONNECTOR 4P  DIODE RD5.1ESB2 DIODE EGP20G DIODE EGP20G DIODE 1SS133T-77 DIODE MTZJ-3.6A  DIODE 1SS133T-77 DIODE RD5.1ESB2 DIODE AD5.1ESB2 DIODE BSS133T-77 DIODE RD6.8ESB2  DIODE BM1-V1 DIODE EM1-V1 DIODE EW1-V1 DIODE EW1-V1 DIODE EU-1-V1 DIODE FML-G12S			L502 L503 L609 L611 L612	1-412-519-11 1-412-519-11 1-412-533-21 1-412-527-11 1-414-415-11	INDUCTOR 3.3UH INDUCTOR 47UH	
D609 D610 D611 D612 D613	8-719-301-64 8-719-046-74 8-719-302-43 8-719-046-76 8-719-045-48	DIODE RU4DS DIODE AU-01Z-V1 DIODE EL1Z DIODE RU-3YX-V1 DIODE FML-G12S			L613 L801 L803 L804 L805	1-459-111-00 1-420-872-00 1-459-652-12 1-406-675-11	INDUCTOR, WIDE BAND COIL, DRAM CORE (CDI) COIL, AIR CORE COIL, HORIZONTAL LINEARITY COIL, CHOKE 4.7MMH	
D614 D615 D616 D617	8-719-045-48 8-719-046-75 8-719-110-03	DIODE FML-G12S DIODE EU-1-V1 DIODE RD7.5ESB2					ISFORMER >	
D618		DIODE 1SS133T-77 DIODE 1SS133T-77			Pe00 V	1-421-776-21 1-421-776-21	LPP LPP	
D619 D620 D622 D625 D626	8-719-991-33 8-719-923-60 8-719-991-33	DIODE 1SS133T-77 DIODE 1SS133T-77 DIODE MTZJ-T-77-9.1A DIODE 1SS133T-77 DIODE AU-01Z-V1			PS601 A	1-532-686-91 1-532-686-91	LINK >  LINK, IC 2.7A (ICP-F75)  LINK, IC 2.7A (ICP-F75)  LINK, IC 2.7A (ICP-F75)  LINK, IC 2.7A (ICP-F75)	
D800 D801 D802 D803	8-719-991-33	DIODE 1SS133T-77 DIODE 1SS133T-77 DIODE 1SS133T-77 DIODE GP08D			PS801 1	1-532-605-91	LINK, IC 0.4A (ICP-F10) SISTOR >	
D807 D809 D810 D812 D817 D902	8-719-302-43 8-719-018-82 8-719-302-43 8-719-038-49 8-719-109-89	DIODE EL1Z DIODE RGP02-20EL-6394			Q501 Q502 Q503 Q601 Q602	8-729-173-38 8-729-900-89 8-729-025-04 8-729-320-28 8-729-027-08	TRANSISTOR 2SC2785-HFE TRANSISTOR 2SA733-K TRANSISTOR DTC144ES TRANSISTOR 2SC3852A TRANSISTOR 2SA1667 TRANSISTOR 2SC2389STP-R	
				ļ	Q604	8-729-024-35	TRANSISTOR 2SC2808STP-R	

Les composants identifies par une trame et une marque /r̂, sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie. The components identified by shading and marked to are critical for safety.

Replace only with the part number specified.



REF.NO.	PART NO.	DESCRIPTION	V		REMARK	REF.NO.	PART NO.	DESCRIPTIO	N			REMARK
Q605 Q606 Q607	8-729-119-78 8-729-900-65 8-729-119-78	TRANSISTOR 2S TRANSISTOR DT TRANSISTOR 2S	A144ES			R630 A	1-249-415-11 1-244-945-91 1-218-265-21 1-205-949-11	METAL	680 1M 8.2M 1.8	5%	1/4W 1/2W 1W 10W	P
Q800 Q801 Q802 Q803 Q805	8-729-119-78 8-729-017-06 8-729-016-32 8-729-119-80 8-729-900-89	TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR DT	C4793 C4927-01 C2688-LR	L		R632 R633 R634 R635	1-247-807-31 1-247-807-31 1-249-397-11 1-249-437-11	CARBON CARBON CARBON CARBON	100 100 22 47K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	F
Q1200 Q1201 Q1202	8-729-119-78 8-729-900-74 8-729-900-80	TRANSISTOR 2S TRANSISTOR DT TRANSISTOR DT	C143TS C114ES	?E		R636 R637 R638	1-249-417-11 1-247-815-91 1-247-863-91	CARBON	1K 220 22K	5% 5% 5%	1/4W 1/4W 1/4W	
Q1203 Q1204	8-729-900-74 8-729-900-74	TRANSISTOR DT				R639 R640 R641	1-215-431-00 1-216-381-11 1-216-381-11	METAL OXIDE	2.7K 0.22 0.22		1/4W 3W 3W	F F
	< RES	SISTOR >				R642	1-205-949-11	WIREWOUND	1.8	5%	100	
R500 R502 R503 R504 R505	1-215-457-00 1-249-421-11 1-249-429-11 1-215-443-00 1-249-382-11	METAL CARBON CARBON METAL CARBON	2.2K 5 10K 5 8.2K 1	1% 1/41 5% 1/41 5% 1/41 1% 1/41 5% 1/41	N N	R644 R645 R646 R647 R648	1-247-807-31 1-249-422-11 1-249-377-11 1-202-933-61 1-216-397-11	CARBON CARBON FUSIBLE	100 2.7K 0.47 0.1 4.7	5% 5% 5% 10% 5%	1/4W 1/4W 1/4W 1/2W 3W	F F F
R506 R507 R508 R509 R510	1-215-459-00 1-215-888-00 1-216-372-00 1-249-443-11 1-249-443-11	METAL METAL OXIDE METAL OXIDE CARBON CARBON	220 1.8 0.47	1% 1/4 <sup>1</sup> 5% 2W 5% 2W 5% 1/4 <sup>1</sup> 5% 1/4 <sup>1</sup>	F F	R800 R801 R802 R803 R804	1-249-421-11 1-249-429-11 1-249-431-11 1-249-426-11 1-249-430-11	CARBON	2.2K 10K 15K 5.6K 12K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W 1/4W	
R517 R518 R520 R521 R522	1-215-427-00 1-215-427-00 1-215-457-00 1-215-457-00 1-247-863-91	METAL METAL METAL METAL CARBON	1.8K 1 33K 1 33K 1	1% 1/4' 1% 1/4' 1% 1/4' 1% 1/4' 1% 1/4'	A A N	R805 R809 R812 R813 R814	1-249-425-11 1-247-901-11 1-249-421-11 1-215-869-11 1-249-411-11	CARBON CARBON METAL OXIDE	4.7K 820K 2.2K 1K 330	5% 5% 5% 5%	1/4W 1/4W 1/4W 1W 1/4W	F
R523 R524 R525 R526 R527	1-247-863-91 1-249-425-11 1-249-425-11 1-249-421-11 1-215-449-00	CARBON CARBON CARBON	4.7K 4.7K 2.2K	5% 1/4° 5% 1/4° 5% 1/4° 5% 1/4° 1% 1/4°	N N N	R816 R817 R819 R820 R821	1-215-919-00 1-215-919-00 1-216-347-11 1-249-403-11 1-216-474-11	CARBON	2.2K 2.2K 0.68 68 82	5% 5% 5% 5%	3W 3W 1W 1/4W 3W	F F F
R529 R600 R601 R603 R604	1-247-895-91 1-216-490-11 1-249-417-11 1-215-875-11 1-249-420-11	METAL OXIDE CARBON METAL OXIDE	39K 5	5% 1/4 5% 3W 5% 1/4 5% 1W 5% 1/4	F W F	R822 R824 R826 R827 R828	1-215-868-00 1-249-420-11 1-247-752-11 1-249-425-11 1-249-436-11	METAL OXIDE CARBON CARBON CARBON CARBON	680 1.8K 1K 4.7K 39K	5%	1W 1/4W 1/2W 1/4W 1/4W	F
R605 R607 R608 R610 R611	1-216-421-11 1-216-365-00 1-215-419-00	METAL OXIDE	0.47 820	5% 2W 5% 1W 5% 2W 1% 1/4 5% 1W	F F W	R829 R830 R833 R836 R837	1-249-493-11 1-217-778-11 1-249-421-11 1-249-439-11 1-249-432-11	FUSIBLE CARBON CARBON	56K 1K 2.2K 68K 18K	5% 5% 5% 5%	1/2N 1W 1/4N 1/4N 1/4N	F F
R612 R613 R614 R615 R616	1-249-428-11 1-249-417-11 1-215-877-11 1-249-435-11 1-215-479-00	CARBON METAL OXIDE CARBON	22K 33K	5% 1/4 5% 1/4 5% 1W 5% 1/4 1% 1/4	W F W	R840 R841 R842 R843 R846	1-247-807-31 1-249-418-11 1-247-891-00 1-247-883-00 1-249-441-11	CARBON CARBON CARBON	100 1.2K 330 150K 100K	5% 5% 5%	1/4V 1/4V 1/4V 1/4V 1/4V	
R617 R618 R619 R620 R621	1-215-901-00 1-247-863-91 1-216-425-11 1-247-895-00 1-216-425-11	CARBON METAL OXIDE CARBON	22K 56 470K	5% 2W 5% 1/4 5% 1W 5% 1/4 5% 1W	F	R847 R848 R849 R850 R851	1-247-887-00 1-247-887-00 1-249-429-11 1-249-425-11 1-215-898-11	CARBON CARBON CARBON	220K 220K 10K 4.7K 10K	5% 5%	1/47 1/47 1/47 1/47 2W	F
R622 R623 R624 R625 R626	1-249-437-11 1-249-429-11 1-249-405-11 1-249-434-11 1-249-430-11	CARBON CARBON CARBON	10K 100 27K	5% 1/4 5% 1/4 5% 1/4 5% 1/4 5% 1/4	W W F W	R852 R901 R902 R907 R916	1-249-432-11 1-247-734-11 1-247-734-11 1-247-804-11 1-247-791-91	CARBON CARBON CARBON	18K 39 39 75 22	5% 5% 5% 5% 5%	1/47 1/27 1/27 1/47 1/47	

REF.NO. PART NO. DESCRIPTION REMARK R917 1-247-791-91 CARBON 22 5% 1/4W R1200 1-249-425-11 CARBON 4.7K 5% 1/4W R1201 1-249-434-11 CARBON 5% 27K 1/4W 1-249-393-11 CARBON R1202 10 5% 1/4W R1203 1-249-421-11 CARBON 2.2K 5% 1/4W R1204 1-249-421-11 CARBON 2.2K 5% 1/4W R1205 1-249-428-11 CARBON 8.2K 5% 1/4W R1206 1-249-428-11 CARBON 8.2K 5% 1/4W R1208 1-212-849-00 FUSIBLE 4.7 5% 1/4W F R1209 1-212-849-00 FUSIBLE 5% 4.7 1/4W R1211 1-249-424-11 CARBON 3.9K 5% 1/4W R1212 1-249-424-11 CARBON 3.9K 5% 1/4W R1213 1-249-421-11 CARBON 2.2K 5% 1/4W R1216 1-249-413-11 CARBON 5% 470 1/4W 1-249-425-11 R1217 CARBON 4.7K 5% 1/4W < VARIABLE RESISTOR > RV301 1-238-552-11 RES, ADJ, CARBON 470K < RELAY > RY600: /A 1-755-018-11 RELAY < SPARK GAP > SG801 1-519-422-11 GAP, SPARK < TRANSFORMER > T601 1 1-426-805-12 SRT T800 1-459-390-00 COIL (WITH CORE) T803 1 1-453-169-11 TRANSPORMER ASSY, FLYBACK (UX-1604A2) T804 1-437-090-00 HDT < THERMISTOR > THP600 A 1-809-827-11 THERMISTOR, POSITIVE \*A-1646-092-A H1 BOARD, COMPLETE < CAPACITOR > C900 1-101-810-00 CERAMIC 100PF 500V 5% C901 1-101-810-00 CERAMIC 100PF 5% 500V C902 1-137-372-11 FILM 0.022MF 5% 50V C903 1-137-372-11 FILM 0.022MF 5% 50V C907 1-124-903-11 ELECT 1MF 50V < CONNECTOR > CN900 1-568-678-11 TERMINAL BLOCK, S 3P CN906 \*1-564-516-11 PLUG, CONNECTOR 13P < JACK > J900 1-764-606-11 JACK < COIL > L900 1-408-409-00 INDUCTOR 10UH L901 1-408-409-00 INDUCTOR 10UH L902 1-408-409-00 INDUCTOR 10UH L903 1-408-409-00 INDUCTOR 10UH

Les composants identifies par une trame et une marque /\hat\n sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie. The components identified by shading and marked A are critical for safety.

Replace only with the part number specified.

REF.NO.	PART NO.	DES	CRIPTION			REMARK
	< RES	SISTOR >				
R905 R906 R909 R910 R915	1-247-804-11 1-247-804-11 1-249-437-11 1-249-437-11 1-247-791-91	CARBON CARBON CARBON	75 47K 47K	5% 5% 5%	1/4W 1/4W	
*****	******	*****	******	****	******	*****
	*A-1646-070-A		RD, COMPLETE			
	< CAL	ACITOR :	>			
C904 C905	1-124-910-11 1-124-907-11		47MF 10MF		20% 20%	50V 50V
	< CON	NECTOR :	•			
CN907	*1-564-509-11	PLUG, (	CONNECTOR 6P			
	< DIC	DE >				
D901	8-719-030-11	DIODE S	SLA-570KT3F			
	< IC	>				
IC900	8-741-790-11	IC SBX1	1790-11			
	< RES	ISTOR >				
R900 R908	1-247-815-91 1-249-401-11		220 47	5% 5%		
******	*******	******	******	****	******	******
	*A-1646-093-A	H3 BOAR	D, COMPLETE			
	< CON	NECTOR >				
CN908	*1-564-506-11	PLUG, C	ONNECTOR 3P			
	< RES	ISTOR >				
R911 R912 R913 R914	1-249-423-11 1-249-429-11 1-249-423-11 1-249-429-11	CARBON CARBON	3.3K 10K 3.3K 10K	5%	1/4W 1/4W 1/4W 1/4W	
	< SWI	ICH >				
S900 S901 S902	1-692-979-11 1-692-979-11 1-692-979-11	SWITCH,	TACTILE TACTILE TACTILE			
******	*******	******	******	*****	******	*****
				,		

REMARK

Les composants identifies par une trame et une marque A sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie. The components identified by shading and marked  $\hat{x}$  are critical for safety. Replace only with the part number specified.

REF.NO.

PART NO.

DESCRIPTION

REF.NO. PART NO. DESCRIPTION REMARK MISCELLANEOUS \*\*\*\*\*\*\*\*\*\* 1-452-032-00 MAGNET, DISK; 10MM Ø 1-452-094-00 MAGNET, ROTATABLE DISK; 15MM Ø 1-452-277-00 MAGNET, BMC 1-453-169-11 TRANSPORMER ASSY, FLYBACK (UX-1604A2) 1-544-525-11 SPEAKER

1. 1-571-433-21 SMITCH, PUSH (AC POWER)

1. 1-690-270-21 CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-C2173B/C2171K/C2171KR)

1. 1-765-286-11 CORD, POWER (WITH NOISE PILTER) 2.5A/250V (KV-C2171D) 8-598-045-00 TUNER (BTP-EC411)
1 8-451-295-43 DEPLECTION YOKE (Y21PFA2)
1 8-738-783-05 PICTURE TUBE (SD-1691 (A51JXH61X) ACCESSORIES AND PACKING MATERIALS \* \*4-033-049-01 CUSHION (LOWER) (ASSY) \*4-033-050-01 CUSHION (UPPER) (ASSY) \*4-033-051-01 INDIVIDUAL CARTON \*4-039-905-02 BAG, PROTECTION (KV-C2173B/C2171D/C2173E/C2171K) \*4-042-476-01 BAG, PROTECTION (KV-C2171KR) 4-203-171-51 MANUAL, INSTRUCTION (KV-C2173B) (FRENCH/GERMAN/ITALIAN) 4-203-171-11 MANUAL, INSTRUCTION (KV-C2171D) (GERMAN/ENGLISH/NORWEGIAN) 4-203-171-71 MANUAL, INSTRUCTION (KV-C2173E) 4-203-171-91 MANUAL, INSTRUCTION (KV-C2171K) (ENGLISH/CZECH/POLISH) 4-203-223-91 MANUAL, INSTRUCTION (KV-C2171KR) (ENGLISH/RUSSIAN/BULGARIAN) REMOTE COMMANDER 1-467-706-11 COMMANDER, STANDARD TYPE (RM-833)

\*

**—** 69 **—**